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Water Resources Data for Arizona

Water Year 1972

Part 2. Water Quality Records

MARCH 3, 1849

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UNITED STATES
DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-72-2

Prepared in cooperation with the State of Arizona
and with other agencies

166

CALENDAR FOR WATER YEAR 1972

OCTOBER 1971

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
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31						

NOVEMBER 1971

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DECEMBER 1971

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JANUARY 1972

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FEBRUARY 1972

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MARCH 1972

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APRIL 1972

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MAY 1972

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28	29	30	31			

JUNE 1972

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JULY 1972

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30	31					

AUGUST 1972

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20	21	22	23	24	25	26
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SEPTEMBER 1972

S	M	T	W	T	F	S
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3	4	5	6	7	8	9
10	11	12	13	14	15	16
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Water resources data for the 1972 water year for Arizona consist of records of discharge and water quality of streams, and water quality of lakes and reservoirs. This report contains water quality for 46 gaging stations. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous analyses. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating local, State, and Federal agencies in Arizona.

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for
Arizona
Water Year 1972

Part 2. Water Quality Records

MARCH 3, 1849

UNITED STATES
DEPARTMENT OF THE INTERIOR

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT AZ-72-2

Prepared in cooperation with the State of Arizona
and with other agencies

Prepared in cooperation with

Bureau of Reclamation, U.S. Department of the Interior
Environmental Protection Agency, U.S. Department of the Interior
Soil Conservation Service, U.S. Department of Agriculture
Arizona Water Commission
Metropolitan Water District of Southern California

Water resources records, 1972 for Arizona are in the following reports of the U.S. Geological Survey:

1. Water Resources Data for Arizona
   Part 1. Surface Water Records

2. Water Resources Data for Arizona
   Part 2. Water Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
P.O. Box 4070
Tucson, Arizona 85717

1974

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[Letters after station name designate type of data: (c) chemical or specific conductance; (t) water temperature; (s) sediment]

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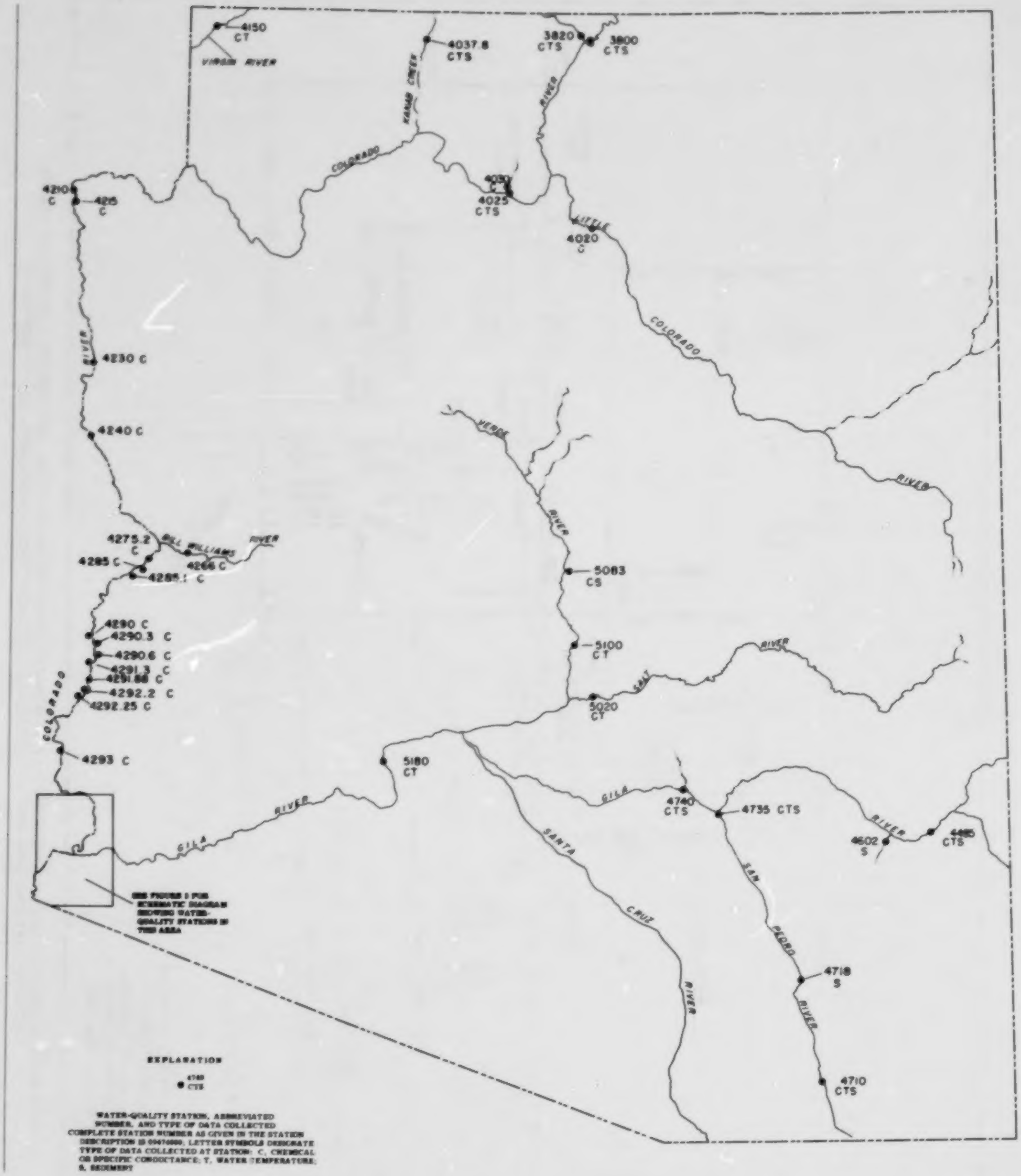
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4230 C
4240 C
VERDE
RIVER
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C
BILL WILLIAMS
RIVER
4285 C
4266 C
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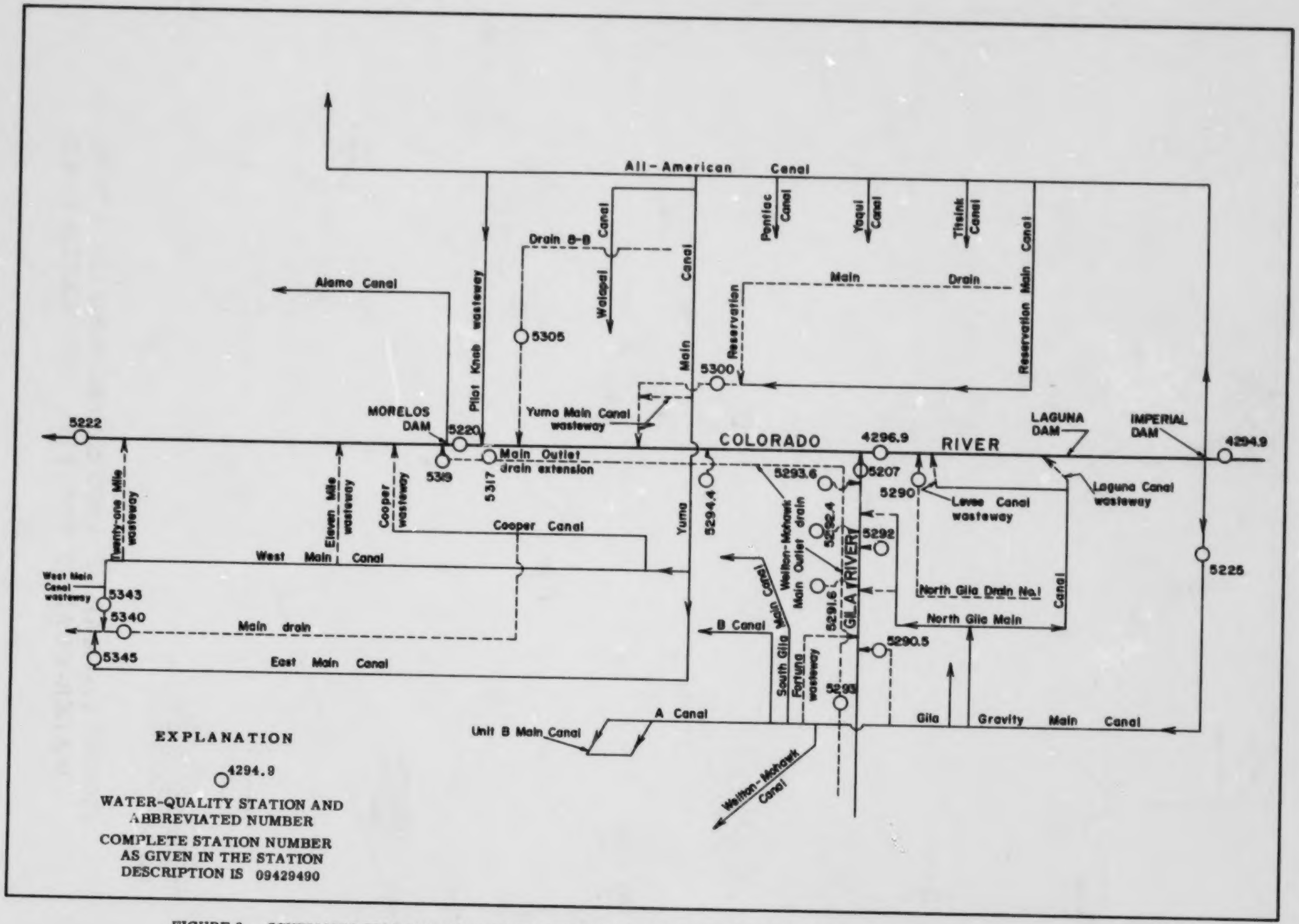
COMPLETE STATION NUMBER AS GIVEN IN THE STATION DESCRIPTION IS 09474000. LETTER SYMBOLS DESIGNATE TYPE OF DATA COLLECTED AT STATION: C, CHEMICAL OR SPECIFIC CONDUCTANCE; T, WATER TEMPERATURE; S, SEDIMENT

FIGURE 1.--MAP OF ARIZONA SHOWING LOCATIONS OF WATER-QUALITY STATIONS, 1972 WATER YEAR.


All-American Canal
Pontiac Canal
Yaqui Canal
Titsink Canal
Reservation Main Canal
Main Drain
Reservation
Drain 8-B
Canal
Wolapai
Main
Canal
Alamo Canal
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5305
5300
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5319
5317
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RIVER
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Yuma
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5292
5291.6
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North Gila Drain No.1
North Gila Main
Canal
5225
5290.5
5293
Twenty-one Mile wasteway
Eleven Mile wasteway
Cooper wasteway
Cooper Canal
West Main Canal
West Main Canal wasteway
5343
5340
Main drain
5345
East Main Canal
B Canal
South Gila Main Canal
Fortuna wasteway
A Canal
Unit B Main Canal
Gila Gravity Main Canal
Wellton-Mohawk Canal

EXPLANATION

4294.9

WATER-QUALITY STATION AND ABBREVIATED NUMBER

COMPLETE STATION NUMBER AS GIVEN IN THE STATION DESCRIPTION IS 09429490

FIGURE 2.--SCHEMATIC DIAGRAM SHOWING WATER-QUALITY STATIONS ON STREAMS, DIVERSIONS, AND RETURN FLOWS BETWEEN IMPERIAL DAM AND THE SOUTHERLY INTERNATIONAL BOUNDARY, 1972 WATER YEAR.

WATER RESOURCES DATA FOR ARIZONA, 1972

PART 2. WATER QUALITY RECORDS

INTRODUCTION

Water resources data for the 1972 water year for Arizona include records of data for the chemical and physical characteristics of surface water. Data on the quality of surface water (chemical, temperature, and sediment) were collected from designated sampling sites at predetermined intervals, such as once daily, weekly, monthly, or less frequently; at some sites, data were collected continuously by means of automatic recording devices. Records are given for 77 sampling stations, of which 46 are continuous record stations, 8 are partial-record stations, and 23 are miscellaneous sampling stations. Locations of surface water-quality stations are shown in figures 1 and 2. A few pertinent stations in bordering States are also included. The records were collected by the Water Resources Division of the U.S. Geological Survey under the direction of H. M. Babcock, district chief. These data represent that portion of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Arizona.

The Geological Survey has published records of chemical quality, water temperatures, and sediment since 1941 in an annual series of water-supply papers entitled, ''Quality of Surface Waters of the United States.'' Beginning with the 1964 water year, water-quality records have been released by the Geological Survey in annual reports on a State boundary basis. These reports are for limited distribution and are designed primarily for rapid release of data shortly after the end of the water year. These records will be published later in Geological Survey water-supply papers.

COOPERATION

Assistance in the form of funds or services was given by the Bureau of Reclamation, Environmental Protection Agency, U.S. Department of the Interior; Soil Conservation Service, U.S. Department of

Agriculture; International Boundary and Water Commission, Department of State; Arizona Water Commission; Salt River Valley Water Users' Association; and Metropolitan Water District of Southern California. Several stations were operated from funds appropriated directly to the Geological Survey.

Water-quality data from Lake Mead at Hoover Dam were furnished by the Metropolitan Water District of Southern California.

DEFINITION OF TERMS

Definition of terms and abbreviations related to water-quality and hydrologic data, as used in the text and tabular data of this report, are defined as follows:

Acre-foot (ac-ft, AC-FT) is a quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons.

Bed material is the shifting portion of fragmented alluvial material of which the streambed is composed.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, or about 646,000 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Coliform organisms are a group of bacteria used as an indicator of the sanitary quality of the water. The number of coliform colonies per 100 milliliters is determined by the immediate incubation membrane filter method.

Cubic foot per second (cfs, CFS) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Mean discharge is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time. If this discharge is reported instead of the daily mean, the heading of the discharge column in the tables is "Discharge (cfs)."

Drainage area of a stream at a specified location is that area, measured in horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the river above the specified point.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Hardness of water is a physical-chemical characteristic attributable to the presence of alkaline earths (principally calcium and magnesium) and is expressed as equivalent calcium carbonate ($CaCO_3$).

Micrograms per liter (μg/l, UG/L) is a unit expressing the concentration of chemical constituents in solution as weight (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (mg/l, MG/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the weight of solute per unit volume of water. Milligrams or micrograms per liter may be converted to milliequivalents (one thousandth of a gram-equivalent weight of a constituent) per liter by multiplying by the factors in table 1. Concentration of suspended sediment also is expressed in mg/l, and is based on the weight of sediment per liter of water-sediment mixture. Sediment concentrations may be converted to parts per million by using the factors in table 2.

Table 1.--Factors for conversion of chemical constituents in milligrams or micrograms per liter to milliequivalents per liter

Ion	Multiply by	Ion	Multiply by
Aluminum (Al^{+3})*. . . .	0.11119	Chloride (Cl^{-1})	0.02821
Ammonia as NH_4^{+1}. . .	.05544	Chromium (Cr^{+6})*. . .	.11539
Barium (Ba^{+2})	.01456	Cobalt (Co^{+2})*	.03394
Bicarbonate (HCO_3^{-1}) .	.01639	Copper (Cu^{+2})*	.03148
Bromide (Br^{-1})	.01251	Cyanide (CN^{-1})	.03844
Calcium (Ca^{+2})	.04990	Fluoride (F^{-1})	.05264
Carbonate (CO_3^{-2}) . . .	.03333	Hydrogen (H^{+1})	.99209
Hydroxide (OH^{-1})	.05880	Nitrate (NO_3^{-1}).	.01613
Iodide (I^{-1})	.00788	Nitrite (NO_2^{-1})	.02174
Iron (Fe^{+3})*	.05372	Phosphate (PO_4^{-3}). . .	.03159
Lead (Pb^{+2})*	.00965	Potassium (K^{+1})	.02557
Lithium (Li^{+1})*	.14411	Sodium (Na^{+1}).	.04350
Magnesium (Mg^{+2}) . . .	.08226	Strontium (Sr^{+2})* . . .	.02283
Manganese (Mn^{+2})*. . .	.03640	Sulfate (SO_4^{-2})	.02082
Nickel (Ni^{+2})*	.03406	Zinc (Zn^{+2})*.	.03060

*Constituent reported in micrograms per liter; multiply by factor and divide results by 1,000.

Table 2.--Factors for conversion of sediment concentration in milligrams per liter to parts per million*

(All values calculated to three significant figures)

Range of concentration in 1,000 mg/l	Divide by	Range of concentration in 1,000 mg/l	Divide by
0 - 8	1.00	411 - 424	1.26
8.05 - 24	1.01	427 - 440	1.27
24.2 - 40	1.02	443 - 457	1.28
40.5 - 56	1.03	460 - 473	1.29
56.5 - 72	1.04	476 - 489	1.30
72.5 - 88	1.05	492 - 506	1.31
88.5 - 104	1.06	508 - 522	1.32
105 - 120	1.07	524 - 538	1.33
121 - 136	1.08	540 - 554	1.34
137 - 152	1.09	556 - 570	1.35
153 - 169	1.10	572 - 585	1.36
170 - 185	1.11	587 - 602	1.37
186 - 200	1.12	604 - 617	1.38
201 - 217	1.13	619 - 634	1.39
218 - 232	1.14	636 - 650	1.40
234 - 248	1.15	652 - 666	1.41
250 - 264	1.16	668 - 682	1.42
266 - 280	1.17	684 - 698	1.43
282 - 297	1.18	700 - 715	1.44
299 - 313	1.19	717 - 730	1.45
315 - 329	1.20	732 - 747	1.46
331 - 345	1.21	749 - 762	1.47
347 - 361	1.22	765 - 780	1.48
363 - 378	1.23	782 - 796	1.49
380 - 393	1.24	798 - 810	1.50
395 - 409	1.25		

*Based on water density of 1.000 g/ml and a specific gravity of sediment of 2.65.

Miscellaneous site is a location other than continuous- or partial-record stations where random samples are collected to give better areal coverage of water-quality conditions in a river basin.

Partial-record station is a particular site where limited streamflow or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of suspended sediment or bed material determined either by sieve or sedimentation methods.

Particle-size classification, used in this report agrees with recommendations made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	0.00024 - 0.004	Sedimentation
Silt	.004 - .062	Sedimentation
Sand	.062 - 2.0	Sedimentation or sieve
Gravel	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic material is removed and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis (Guy, 1969).

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment discharge is the rate at which dry weight of sediment passes a section of a stream or is the quantity of sediment, as measured by dry weight, or by volume, that is discharged in a given time. It is computed by multiplying discharge times milligrams per liter times 0.0027.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/l).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour period.

Sodium adsorption ratio (SAR) is the expression of relative activity of sodium ions in exchange reaction with soil and is an index of sodium or alkali hazard to the soil. This ratio should be known especially for water used for irrigating farmland.

Solute is any substance derived from the atmosphere, vegetation, soil, or rocks that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current and is expressed in micromhos per centimeter at 25°C. Because the specific conductance is related to the number and specific chemical types of ions in solution, it can be used for approximating the dissolved-solids content in the water. Commonly, the amount of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in micromhos). This relation is not constant from stream to stream, and it may even vary in the same source with changes in the composition of the water.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff." Streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Thermograph is a thermometer that continuously and automatically records, on a chart, the water temperature of a stream. "Temperature recorder" is the term used to indicate the location of the thermograph or a digital mechanism that automatically records water temperature on paper tape.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the water year.

Tons per acre-foot indicates the dry weight of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration in milligrams per liter by 0.00136.

Tons per day is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

SPECIAL NETWORKS AND PROGRAMS

Some of the stations for which data are published in this report are included in special networks and programs. These stations are identified by their title, set in parentheses, under the station name.

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

Irrigation network stations are water-quality stations located at or near certain streamflow gaging stations west of the main stem of the Mississippi River. Data collected at these stations are used to evaluate the chemical quality of surface waters used for irrigation and the changes resulting from the drainage of irrigated lands. Prior to the water year 1966, the data for these stations were published in the annual water-supply paper series, "Quality of Surface Waters for Irrigation, Western States."

Pesticide program is a network of regularly sampled water-quality stations where additional monthly samples are collected to determine the concentration and distribution of pesticides in streams whose waters are used for irrigation or in streams in areas where potential contamination could result from the application of the commonly used insecticides and herbicides.

Radiochemical program is a network of regularly sampled water-quality stations where additional samples are collected twice a year (at high and low flow) to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

DOWNSTREAM ORDER AND STATION NUMBERS

Stations are listed in downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all mainstream stations are listed before the first mainstream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of water-quality stations in the front of this report the rank of tributaries is indicated by indention, each indention representing one rank.

As an added means of identification, each water-quality station, gaging station, and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record and continuous-record stations; therefore, the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Water-quality stations located at or near gaging stations or partial-record stations have the same number as the gaging or partial-record station. Gaps are left in the numbers to allow for new stations that may be established; hence the numbers are not consecutive. The complete 8-digit number for each station, such as 09380000, which appears just to the left of the station name and includes the 2-digit part number "09" plus the 6-digit downstream order number "380000." Records in this report are in Part 9—Colorado River basin. All records for a drainage basin encompassing more than one State could be arranged in downstream order by assembling pages from the various State reports by station number to include all records in the basin.

COLLECTION AND EXAMINATION OF DATA

Water samples for analyses usually are collected at or near gaging stations. The discharge records at these stations are used in conjunction with the computations of the chemical constituents and sediment discharges. Discharge records for streams in Arizona have been released in the report, "Water Resources Data for Arizona, 1972, Part 1. Surface Water Records."

The data in this report include a description of the sampling station and tabulations of the samples analyzed. The description of the sampling station gives the location, drainage area, periods of record for the various water-quality data, extremes of the pertinent data, and general remarks, in a format similar to that used for streamflow gaging stations.

Water-quality information is presented for chemical quality, microbiological, water temperature, and fluvial sediment. Chemical quality includes concentrations of individual dissolved constituents and certain properties or characteristics, such as hardness, sodium adsorption ratio, specific conductance, and pH. Microbiological information includes quantitative identification of certain bacteriological indicator organisms. Water-temperature data represent once-daily observations except for stations where a continuous temperature recorder furnishes information from which daily minimums and maximums are obtained. Fluvial-sediment information is given for suspended-sediment discharges and concentrations and for particle-size distribution of suspended sediment and bed material.

Prior to the 1968 water year, data for chemical constituents and concentrations of suspended sediment were reported in parts per million (ppm) and water temperatures were reported in degrees Fahrenheit (°F). In October 1967, the U.S. Geological Survey began to use the metric system; data for chemical constituents and concentrations of suspended sediment are now reported in milligrams per liter (mg/l) and water temperatures are given in degrees Celsius (centigrade, °C). In waters with a density of 1.000 g/ml (grams per milliliter), parts per million and milligrams per liter can be considered equal. In waters with a density greater than 1.000 g/ml, values in milligrams per liter should be divided by the density to convert to parts per million. To convert temperature in degrees Celsius to degrees Fahrenheit, see table 3, below.

Table 3.--Degrees Celsius (°C) to degrees Fahrenheit (°F)*

(Temperature reported to nearest 0.5°C)

°C	°F	°C	°F	°C	°F	°C	°F	°C	°F
0.0	32	10.0	50	20.0	68	30.0	86	40.0	104
.5	33	10.5	51	20.5	69	30.5	87	40.5	105
1.0	34	11.0	52	21.0	70	31.0	88	41.0	106
1.5	35	11.5	53	21.5	71	31.5	89	41.5	107
2.0	36	12.0	54	22.0	72	32.0	90	42.0	108
2.5	36	12.5	54	22.5	72	32.5	90	42.5	108
3.0	37	13.0	55	23.0	73	33.0	91	43.0	109
3.5	38	13.5	56	23.5	74	33.5	92	43.5	110
4.0	39	14.0	57	24.0	75	34.0	93	44.0	111
4.5	40	14.5	58	24.5	76	34.5	94	44.5	112
5.0	41	15.0	59	25.0	77	35.0	95	45.0	113
5.5	42	15.5	60	25.5	78	35.5	96	45.5	114
6.0	43	16.0	61	26.0	79	36.0	97	46.0	115
6.5	44	16.5	62	26.5	80	36.5	98	46.5	116
7.0	45	17.0	63	27.0	81	37.0	99	47.0	117
7.5	45	17.5	63	27.5	81	37.5	99	47.5	117
8.0	46	18.0	64	28.0	82	38.0	100	48.0	118
8.5	47	18.5	65	28.5	83	38.5	101	48.5	119
9.0	48	19.0	66	29.0	84	39.0	102	49.0	120
9.5	49	19.5	67	29.5	85	39.5	103	49.5	121

*C = 5/9 (°F - 32) or °F = 9/5 (°C) + 32.

In October 1968, the Geological Survey began reporting many of the chemical constituents as well as the minor elements in micrograms per liter instead of milligrams per liter. (See section entitled "Definition of Terms.")

Solutes

The methods of collecting and analyzing water samples for determining the kinds and concentrations of solutes are described by Brown, Skougstad, and Fishman (1970). One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge depending on the source of material and the turbulence and the mixing of the stream. Some must be sampled at several verticals across the channel to determine accurately the solute load.

The daily chemical-quality data in this report represent equal-volume composites for 2- to 30-day periods; the composite periods are selected on the basis of specific conductance of the daily samples and fluctuation of water discharge.

At sites where water-quality data were collected less frequently than daily, the data may represent conditions only at the time of sampling. For such sites, however, observations obtained over a period of years show relations that are useful in predicting the long-term water-quality characteristics.

If dissolved solids are reported in an analysis as both residue on evaporation at 180°C and sum of determined constituents, the values for "tons per day" and "tons per acre-foot" are calculated from the residue on evaporation at 180°C.

Temperature

Water temperatures are measured at most of the water-quality stations. For daily stations, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where continuously recording thermographs are present, the records consist of maximum and minimum temperatures for each day and the monthly averages.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross section.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment-discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment discharges for other periods of similar water discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of the quantities of suspended sediment, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included.

WATER-SUPPLY PAPERS

Table 4 shows the annual series of water-supply papers that give information on quality of surface waters in Arizona. Data for the Colorado River basin are given in part 9.

Table 4.--Annual series of water-supply papers on quality of surface waters in Arizona

Water year	Water-supply paper number	Water year	Water-supply paper number
1941	A942	1955	C1403
1942	A950	1956	C1453
1943	A970	1957	C1523
1944	A1022	1958	C1574
1945	A1030	1959	C1645
1946	A1050	1960	C1745
1947	A1102	1961	C1885
1948	B1133	1962	C1945
1949	B1163	1963	C1951
1950	C1189	1964	D1958
1951	C1200	1965	D1965
1952	C1253	1966	D1995
1953	C1293	1967	D2015
1954	C1353	1968	E2098

A Parts 1-14.
B Parts 7-14.
C Parts 9-14.
D Parts 9-11.
E Parts 9-10.

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__________ 1941, Methods of analyzing sediment samples: Rept. 4.

__________ 1953, Accuracy of sediment size analyses made by the bottom-withdrawal-tube method: Rept. 10.

__________ 1957, The development and calibration of visual accumulation tube: Rept. 11.

__________ 1957, Some fundamentals of particle size analysis: Rept. 12.

__________ 1959, Federal Inter-agency sedimentation instruments and reports: Rept. AA.

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_____________ 1963, Determinations of fluvial sediment discharge: Rept. 14.

COLORADO RIVER MAIN STEM

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.

(Irrigation network station)

LOCATION.--Lat 36°51'53", long 111°35'15", in NE¼SE¼ sec. 13, T. 40 N., R. 7 E., Coconino County, in Navajo Indian Reservation, at gaging station at head of Marble Gorge at Lees Ferry, 0.8 mile upstream from Paria River, 16 miles downstream from Glen Canyon Dam, 28 miles downstream from Utah-Arizona State line, and 61.5 miles upstream from Little Colorado River.

DRAINAGE AREA.--107,900 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January to July 1926, October 1926 to June 1927, October 1928 to September 1930, November 1942 to October 1945, October 1947 to September 1972.
Water temperatures: July 1949 to September 1972.
Sediment records: October 1928 to December 1933, November 1942 to September 1944, October 1947 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT.												
23...	1300	7000	9.0	0	68	22	64	3.3	153	0	220	44
NOV.												
16...	1100	15000	8.7	10	62	23	69	3.3	153	0	220	46
DEC.												
27...	1100	13700	9.1	20	77	25	67	6.7	156	0	220	58
JAN.												
04...	1400	23500	9.3	10	63	22	65	3.8	149	0	220	45
FEB.												
05...	1100	6520	9.6	20	72	23	75	4.1	160	0	240	55
MAR.												
02...	1200	4740	10	20	72	26	80	3.8	164	0	240	57
APR.												
20...	1430	23700	9.8	10	80	28	92	4.1	168	0	270	61
MAY												
12...	1400	21300	9.3	20	78	27	81	3.6	166	0	260	57
JUNE												
27...	1040	11800	9.4	10	78	25	79	4.0	169	0	260	54
JULY												
26...	1350	23200	8.6	10	69	24	73	3.2	152	0	240	46
AUG.												
29...	1445	25000	8.8	10	71	24	71	3.6	155	0	240	46
SEP.												
06...	1645	21900	8.7	10	67	23	73	3.5	154	0	230	50

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.--Continued

EXTREMES.--1971-72:

Specific conductance: Maximum daily, 1,000 micromhos on several days during March and April; minimum daily, 700 micromhos Jan. 1.

Water temperatures: Maximum, 15.0°C July 8; minimum, 6.0°C Jan. 5.

Period of record:

Specific conductance: Maximum daily, 1,260 micromhos Apr. 20, 21, 1967; minimum daily, 460 micromhos Aug. 10, 1965.

Water temperatures: Maximum, 21.0°C on several days during August, September, and October, 1965, 1967, 1968; minimum, 2.0°C Jan. 29, 30, 1970.

REMARKS.--Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965. Daily specific conductance values for water years 1971 and 1972 are field determinations.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT. 23...	.2	.79	.03	80	--	509	.69	260	130	1.7	806	7.8
NOV. 16...	.3	.66	.00	100	--	511	.70	250	120	1.9	818	7.6
DEC. 27...	.5	.66	.00	90	--	543	.74	300	170	1.7	808	7.9
JAN. 04...	.2	.64	.03	100	--	505	.69	250	130	1.8	794	7.9
FEB. 05...	.4	.79	.03	100	--	561	.76	270	140	2.0	869	7.8
MAR. 02...	.3	.78	.00	100	--	573	.78	290	150	2.1	915	7.7
APR. 20...	--	.84	.06	--	--	633	.86	310	180	2.3	968	7.8
MAY 12...	.4	.74	.00	90	--	601	.82	310	170	2.0	948	7.9
JUNE 27...	.1	.87	.00	100	--	597	.81	300	160	2.0	923	7.7
JULY 26...	.4	.63	.00	90	--	542	.74	270	150	1.9	856	7.0
AUG. 29...	.3	.62	.03	90	564	544	.77	280	150	1.9	850	7.9
SEP. 06...	.4	.62	.00	120	524	534	.71	260	140	2.0	850	7.8

09380000 COLORADO RIVER AT LEES FERRY, ARIZ. --Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT.							
23...	1300	7000	760	6.5	11.5	16.0	7.4
NOV.							
16...	1100	15000	760	6.5	12.0	10.0	9.0
DEC.							
27...	1100	13700	800	6.5	8.5	10.5	9.6
JAN.							
04...	1400	23500	760	6.5	9.0	12.0	9.3
FEB.							
05...	1100	6520	880	7.7	7.0	6.5	9.6
MAR.							
02...	1200	4740	900	7.8	9.0	19.5	7.7
APR.							
20...	1430	23700	975	7.8	9.5	--	8.5
MAY							
12...	1400	21300	--	7.5	9.5	--	7.9
JUNE							
27...	1040	11800	890	7.4	9.0	--	7.7
JULY							
26...	1350	23200	810	8.0	10.0	--	9.0
SEP.							
18...	0830	9850	830	--	12.0	21.0	6.0

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	830	790	800	700	820	900	980	960	820	750	780	760
2	830	790	800	800	800	900	980	950	850	790	860	790
3	850	720	800	810	800	900	980	930	880	800	850	800
4	820	800	800	810	800	---	950	930	950	800	850	810
5	820	800	810	850	860	---	950	940	950	790	850	810
6	800	780	820	820	820	950	980	940	---	---	850	800
7	800	720	800	820	860	950	990	920	---	850	850	850
8	790	720	810	840	860	950	1000	930	900	850	840	860
9	790	820	800	850	820	950	1000	930	880	880	850	850
10	790	820	800	880	820	950	1000	930	900	800	890	830
11	780	800	780	840	850	920	1000	920	900	820	870	820
12	750	810	710	800	820	920	990	920	900	850	880	850
13	780	850	800	850	850	920	1000	910	820	880	880	800
14	750	850	820	800	850	920	1000	920	850	880	890	790
15	790	830	800	800	850	920	950	920	880	880	850	810
16	810	800	800	800	850	950	950	900	820	850	800	800
17	810	800	800	820	850	950	960	900	870	850	850	810
18	850	800	800	800	850	950	950	910	870	850	840	830
19	880	800	800	800	850	920	950	920	860	820	860	810
20	880	820	800	780	850	920	1000	930	890	850	820	820
21	---	800	810	820	860	920	990	920	880	[illegible]	830	800
22	800	800	810	850	880	950	---	900	880	870	830	790
23	800	820	800	820	880	950	---	900	860	870	830	800
24	800	810	800	820	880	950	960	880	900	800	830	800
25	800	810	---	850	880	950	980	880	800	820	850	780
26	800	---	---	880	880	950	950	890	880	850	840	780
27	800	---	820	880	880	950	940	900	900	860	850	750
28	800	810	820	880	900	980	920	910	900	860	840	800
29	800	810	780	880	900	980	920	910	890	860	840	810
30	800	810	820	890	---	980	920	910	880	860	840	800
31	780	---	810	890	---	1000	---	910	---	860	840	---
AVG	806	800	801	830	851	941	969	917	877	841	846	807

YEARLY AVERAGE = 857

09380000 COLORADO RIVER AT LEES FERRY, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12.0	11.0	10.0	9.0	7.5	8.0	9.0	10.5	12.0	12.5	10.0	11.0
2	12.0	12.0	11.0	9.0	8.0	8.0	9.5	8.5	12.0	10.0	11.0	11.0
3	10.5	12.0	11.0	9.0	8.0	8.0	9.5	9.0	12.5	12.5	11.0	12.0
4	11.0	12.0	11.0	8.0	8.0	---	10.0	9.5	11.0	10.5	14.0	11.0
5	13.0	0.0	11.0	6.0	8.0	---	10.0	9.5	10.5	12.0	14.0	12.0
6	11.5	12.0	10.0	8.5	7.5	10.0	10.0	11.5	---	---	13.0	12.0
7	11.0	12.5	10.0	8.0	7.5	10.5	11.0	10.0	---	13.0	12.0	13.0
8	11.0	13.0	10.5	8.0	8.0	10.5	11.0	10.0	12.0	15.0	12.0	11.0
9	11.0	12.0	10.0	8.0	8.0	10.5	11.0	10.0	13.0	14.0	11.0	12.0
10	13.0	12.0	10.0	7.0	9.0	10.5	11.0	9.5	12.0	11.0	11.5	11.0
11	12.5	12.0	10.0	8.0	8.5	11.0	11.0	9.5	12.0	12.0	11.0	12.0
12	11.5	12.0	10.0	8.5	8.5	10.0	11.0	8.5	11.0	13.0	13.0	11.0
13	11.0	0.0	9.0	8.0	8.5	9.0	11.0	12.0	11.0	13.0	11.5	12.0
14	11.0	11.0	8.5	8.0	8.0	9.0	8.0	11.0	11.0	14.0	11.5	12.0
15	11.0	12.0	9.0	8.0	8.0	9.0	11.0	13.0	12.0	14.0	11.5	12.0
16	11.0	12.0	10.0	8.0	8.0	9.5	10.5	12.0	11.5	13.0	11.0	11.5
17	11.0	11.5	9.0	8.0	8.0	9.5	10.5	11.0	11.5	12.0	11.0	12.0
18	11.0	10.0	9.0	8.0	8.5	9.5	10.5	10.0	13.5	12.0	11.5	12.0
19	11.0	10.0	9.0	8.0	10.5	10.0	8.0	12.0	11.0	13.0	11.0	11.0
20	11.0	11.0	9.0	7.0	9.5	10.5	8.0	11.0	12.0	14.0	12.0	11.0
21	---	0.0	9.0	8.0	9.5	10.5	8.0	11.0	12.0	12.0	11.0	12.0
22	12.0	11.5	9.0	8.0	9.0	10.5	---	11.0	12.0	13.0	11.0	11.0
23	13.0	11.5	9.0	7.5	9.0	11.0	---	11.0	13.0	13.0	11.0	11.0
24	13.0	11.0	9.0	8.0	9.0	11.0	11.5	10.0	10.0	14.0	12.0	11.5
25	13.0	10.0	---	8.0	9.0	10.0	11.0	---	11.0	11.0	10.5	12.0
26	13.0	---	---	8.0	9.5	10.0	8.0	---	12.0	11.5	11.5	11.5
27	12.0	---	9.0	7.0	9.5	10.0	8.5	---	14.0	12.0	12.0	11.0
28	13.0	10.0	9.0	7.0	9.5	9.0	9.5	---	13.5	12.0	11.5	11.5
29	11.0	10.0	8.5	7.0	9.5	9.0	10.0	---	13.0	13.0	11.0	11.0
30	11.0	10.0	9.5	7.5	---	9.0	11.0	---	13.5	13.0	12.0	11.0
31	11.0	---	9.0	7.5	---	9.0	---	---	---	13.5	11.0	---
AVG	11.5	10.0	9.5	8.0	8.5	9.5	10.0	---	12.0	12.5	11.5	11.5

YEARLY AVERAGE = 10.5

PERIODIC DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)
OCT.			
04...	6910	14	261
13...	11100	8	240
20...	9290	8	201
26...	11000	5	148
NOV.			
02...	12300	12	399
12...	14900	19	764
17...	15100	7	285
24...	14000	5	189
DEC.			
01...	14700	18	714
10...	17000	4	184
17...	17200	7	325
27...	11200	3	91
JAN.			
05...	20900	41	2310
13...	15000	11	445
20...	13600	34	1250
29...	11800	146	4650
FEB.			
01...	17100	18	831
07...	8910	15	361
14...	8020	22	476
22...	3350	17	154
MAR.			
01...	6460	38	663
13...	6810	4	74
20...	6430	2	35
APR.			
03...	6490	8	140
14...	21500	119	6910
20...	19500	5	263
MAY			
02...	17800	3	144
11...	18000	5	243
22...	12100	13	425
JUNE			
02...	17900	6	290
12...	13900	8	300
21...	15600	17	716
JULY			
02...	10100	4	109
12...	18900	25	1280
18...	15300	32	1320
25...	17100	8	369
AUG.			
02...	17900	4	193
13...	9470	4	102
23...	17000	232	10600
SEP.			
02...	14500	12	470
10...	11400	1	31
22...	15700	9	382

09382000 PARIA RIVER AT LEES FERRY, ARIZ.

LOCATION.--Lat 36°52'20", long 111°35'38", in NW¼NE¼ sec. 13, T. 40 N., R. 7 E., Coconino County, at gaging station 0.6 mile northwest of Lees Ferry, and 1.1 miles upstream from mouth.

DRAINAGE AREA.--1,410 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1947 to February 1950, October 1969 to September 1972 (partial-record station, discontinued).
Specific conductance: October 1964 to September 1972.
Water temperatures: October 1956 to September 1972.
Sediment records: October 1947 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 3,600 micromhos July 26; minimum daily, 490 micromhos June 1.
Water temperatures: Maximum, 38.0°C June 18; minimum, freezing point on Jan. 4, 11, 12.
Sediment concentrations: Maximum daily, 727,000 mg/l Aug. 28; minimum daily, 5 mg/l Apr. 29, May 27.
Sediment discharge: Maximum daily, 1,080,000 tons Sept. 19; minimum daily, 0.05 ton May 27.

Period of record:
Specific conductance: Maximum daily, 4,750 micromhos July 19, 1971; minimum daily, 320 micromhos May 21, 1967.
Water temperatures (1956-61, 1965-72): Maximum, 38.0°C June 18, 1972; minimum, freezing point on many days during winter months.
Sediment concentrations: Maximum daily, 780,000 mg/l Aug. 9, 1968; minimum daily, 1 mg/l June 1-10, 1950.
Sediment discharge: Maximum daily, 5,100,000 tons Sept. 12, 1958; minimum daily, 0 tons on many days of most years.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
23...	1400	13	11	0	85	43	91	4.7	167	0	430	16
25...	1431	870	15	--	330	66	220	14	174	0	1400	20
JAN.												
04...	1305	1.9	12	0	190	72	180	8.2	222	0	920	31
APR.												
20...	1540	4.3	9.2	10	49	25	45	3.5	144	0	170	14
JULY												
26...	1430	155	13	30	460	110	370	20	249	0	2200	50

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.												
23...	.2	1.1	120	856	768	1.16	390	250	2.0	1110	8.0	13.0
25...	.5	.57	--	2120	2150	2.88	1100	950	2.9	2530	7.5	11.0
JAN.												
04...	.3	.96	180	1570	1530	2.14	770	590	2.8	1990	7.8	.5
APR.												
20...	.3	1.5	0	476	393	.65	230	110	1.3	618	8.3	22.5
JULY												
26...	.7	.12	620	--	3350	4.56	1600	1400	4.0	3700	6.8	29.0

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)	AIR TEMPERATURE (DEG C)	DISSOLVED OXYGEN (MG/L)
JAN. 04...	1305	2.0	1580	7.0	.5	12.5	12.4
APR. 20...	1540	4.3	640	8.6	22.5	--	7.9

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	620	1250	1180	1120	1120	1050	1180	500	490	820	720	1580
2	580	1300	1180	1200	1100	1000	---	520	740	800	990	2400
3	550	1150	1180	1150	1000	---	960	540	750	750	1950	---
4	525	1150	1080	1750	950	---	975	530	530	730	1580	1750
5	780	1100	1050	---	1000	---	940	520	530	790	1000	1550
6	790	1180	1450	1600	1200	1000	770	510	---	---	950	1400
7	790	1190	1100	---	1190	925	740	510	---	710	650	1150
8	525	1300	1120	1000	1150	990	680	510	1980	690	---	1100
9	525	1400	1100	---	1180	925	700	510	2250	680	550	---
10	525	1390	1100	725	---	920	680	510	1920	820	550	675
11	650	1320	850	1120	---	940	670	510	1450	780	530	1100
12	540	1320	640	1200	---	950	690	510	1420	690	550	1150
13	625	1220	620	1200	---	950	680	510	970	640	---	1300
14	625	1220	610	1350	1210	1000	610	510	1010	660	1150	1380
15	675	1250	1200	1200	1220	1010	610	510	890	650	870	1150
16	690	1400	1280	1500	1080	1010	600	510	670	---	1800	710
17	675	1250	1220	1190	1080	890	620	520	620	1180	1390	680
18	2680	1250	---	1260	1180	900	620	520	600	910	2150	670
19	1500	1300	1380	1320	1180	910	610	510	580	1190	1600	1870
20	1250	1320	1400	1220	1100	890	700	510	550	780	1680	2800
21	---	1320	1390	1200	1100	840	---	510	530	620	1400	2100
22	1100	1350	1200	1150	1100	860	---	510	910	590	2200	1950
23	1020	1200	1190	1180	1150	980	---	510	2650	600	2300	1500
24	925	1180	1200	1200	1150	910	870	510	3100	610	1400	1380
25	2170	1200	---	1220	1150	720	810	510	2050	670	1100	1400
26	1770	---	---	1350	1100	700	750	510	1650	3600	700	1450
27	1210	---	1560	1400	1100	710	670	510	1200	1800	690	1440
28	1400	1200	1390	1350	1100	600	620	510	1100	1900	3300	1400
29	1400	1200	1340	1380	1090	590	610	---	1040	1750	2750	1410
30	1400	1220	1500	1190	---	---	600	510	1010	1450	2250	---
31	1150	---	1320	1450	---	1050	---	510	---	1400	1800	---
AVG	989	1250	1170	1260	1120	897	729	513	1190	1010	1400	1420

YEARLY MAXIMUM = 3600 YEARLY MINIMUM = 490 YEARLY AVERAGE = 1080

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.0	11.0	6.0	2.5	5.0	13.0	18.5	18.0	25.0	32.0	31.0	23.0
2	16.0	10.0	6.5	4.0	3.5	11.0	---	19.0	27.0	31.0	30.0	22.0
3	12.5	12.0	5.0	0.5	4.0	---	14.0	18.0	27.0	30.0	25.0	---
4	20.0	12.0	6.0	0.0	0.5	---	14.0	19.0	22.5	29.0	27.0	22.5
5	12.0	13.0	6.0	---	1.0	---	13.0	19.0	23.0	29.5	32.0	24.0
6	13.0	8.0	1.0	0.5	3.0	9.0	22.0	24.0	---	---	27.0	25.0
7	12.0	12.0	4.0	---	2.5	18.0	24.0	24.5	---	25.0	26.0	26.0
8	17.5	13.0	5.0	1.5	8.0	21.0	22.0	27.5	22.0	31.0	---	24.0
9	15.0	12.0	3.0	---	9.0	20.0	22.0	27.0	26.0	29.0	28.0	---
10	21.0	13.5	3.5	0.5	8.0	20.0	20.0	27.0	26.0	32.0	32.0	24.0
11	21.0	12.0	3.0	0.0	8.0	17.0	19.5	14.0	29.0	27.0	30.0	22.0
12	21.0	9.5	4.0	0.0	7.0	18.0	19.5	14.0	31.0	28.0	31.0	20.0
13	23.0	12.0	0.5	5.0	7.0	18.5	19.0	20.0	29.0	35.0	---	27.0
14	26.0	6.5	0.5	4.0	5.5	10.0	19.0	18.0	25.0	35.0	23.5	28.0
15	14.0	9.0	1.0	5.0	7.5	10.5	20.0	28.0	36.0	35.0	22.0	29.0
16	17.5	5.0	0.5	1.0	9.0	9.0	20.0	30.0	33.0	---	21.0	22.0
17	17.0	3.5	2.0	3.0	13.0	18.0	20.0	24.0	25.0	25.5	22.0	20.0
18	11.5	1.5	---	3.0	14.0	19.0	18.0	23.5	38.0	26.0	23.0	18.0
19	7.0	3.5	1.0	1.5	14.5	20.0	12.0	24.0	24.0	22.0	25.0	19.0
20	8.0	6.0	1.0	2.5	14.0	20.0	17.0	22.0	30.5	28.5	26.0	16.5
21	---	5.0	1.0	3.0	14.0	14.5	---	24.0	29.0	30.0	20.0	18.5
22	20.0	5.5	5.0	6.0	9.0	17.0	---	20.0	22.0	31.0	26.0	14.0
23	14.0	6.5	5.0	7.0	12.0	10.5	---	19.0	20.5	30.0	26.0	23.0
24	14.0	7.0	4.0	5.0	12.0	22.0	24.0	19.0	23.5	32.0	26.0	17.5
25	11.0	1.5	---	4.5	12.5	18.0	14.0	27.0	27.5	28.0	18.5	17.0
26	13.5	---	---	5.0	16.0	18.0	11.5	27.0	29.5	29.0	25.0	16.0
27	13.0	---	5.5	5.5	14.0	17.0	12.0	23.0	24.0	25.5	26.0	15.5
28	13.0	5.5	4.0	6.0	11.0	15.0	22.0	24.0	31.5	27.0	18.5	21.0
29	8.0	4.0	3.5	6.0	10.5	15.0	18.5	---	27.0	32.0	22.0	22.0
30	11.0	4.0	3.0	3.5	---	---	18.0	26.0	24.0	29.0	19.0	---
31	13.0	---	2.0	6.0	---	15.0	---	27.0	---	25.0	21.0	---
AVG	15.0	8.0	3.5	3.5	9.0	16.0	18.0	22.5	27.0	29.5	25.0	21.5

YEARLY MAXIMUM = 38.0   YEARLY MINIMUM = 0.0   YEARLY AVERAGE = 16.5

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	9.4	117	3.0	24	1790	116	22	880	52
2	8.8	122	2.9	21	1650	94	22	560	33
3	8.8	97	2.3	19	1200	62	18	420	20
4	9.4	92	2.3	17	1060	49	23	430	27
5	9.2	89	2.2	17	1130	52	20	440	24
6	10	112	3.0	16	840	36	15	420	17
7	9.4	161	4.1	16	620	27	22	580	34
8	9.4	197	5.0	15	640	26	22	940	56
9	9.4	210	5.3	16	620	27	6.5	910	16
10	7.6	152	3.1	15	570	23	7.6	1000	21
11	6.0	85	1.4	16	450	19	6.5	730	13
12	5.5	87	1.3	17	390	18	5.5	290	4.3
13	5.5	104	1.5	18	850	41	8.2	160	3.5
14	5.5	120	1.8	24	880	57	5.3	180	2.6
15	5.0	70	.95	23	720	45	4.5	420	5.1
16	5.0	70	.95	25	780	53	9.4	1000	25
17	8.7	144	12	29	1180	92	6.9	1150	21
18	52	37300	5240	28	1400	102	7.6	3100	64
19	37	35600	3550	16	2500	107	12	4760	154
20	26	8250	579	13	2600	91	16	3590	155
21	19	7000	359	23	2510	156	13	3410	120
22	15	8200	332	30	2400	194	16	940	41
23	10	3700	100	25	1540	104	18	490	24
24	12	1200	39	24	1070	69	33	4440	1340
25	693	272000	595000	24	680	44	341	54300	65800
26	130	87500	32500	26	660	46	384	62800	71200
27	42	43000	4880	23	650	40	227	92800	62000
28	37	73000	7290	21	690	39	49	32000	4230
29	28	31000	2340	20	790	43	31	14000	1170
30	28	4070	307	20	890	48	19	4500	231
31	22	1920	114	--	--	--	7.6	1550	32
TOTAL	1283.6	--	652683.10	621	--	1920	1398.6	--	206935.5

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	4.0	1170	13	9.8	520	14	12	300	9.7
2	6.8	1390	26	6.1	270	4.4	13	195	6.8
3	18	2420	118	8.0	579	20	7.6	200	4.1
4	7.0	1480	28	9.4	875	30	12	200	6.5
5	7.7	1200	25	16	1200	52	13	200	7.0
6	18	1140	55	14	2980	132	12	230	7.5
7	14	1200	45	28	3380	257	13	280	9.8
8	9.8	2050	54	34	2130	193	12	430	14
9	8.7	1850	43	29	1960	156	9.4	340	8.6
10	9.2	1200	30	28	1830	138	9.4	310	7.9
11	20	2020	109	19	1820	93	11	300	8.9
12	31	2240	187	17	1650	76	12	325	11
13	34	2200	202	17	1500	69	13	325	11
14	32	1410	122	21	1150	65	11	270	8.0
15	23	1040	65	21	920	52	12	235	7.6
16	17	990	45	20	600	32	9.4	240	6.1
17	14	700	26	20	550	30	7.6	185	3.8
18	17	1400	79	20	610	33	8.2	179	4.0
19	23	1530	93	19	650	33	8.2	185	4.1
20	25	840	57	19	500	26	7.6	199	4.1
21	24	910	59	18	430	21	8.8	160	3.8
22	21	620	35	19	500	26	9.4	185	4.7
23	20	550	30	19	600	31	7.6	170	3.5
24	22	610	36	18	650	32	5.5	160	2.4
25	17	720	33	18	610	30	3.6	380	3.7
26	15	590	24	17	470	22	2.5	680	4.6
27	20	430	23	16	430	19	2.8	190	1.4
28	17	510	23	17	430	20	2.5	60	.41
29	17	510	23	14	430	16	3.2	58	.50
30	15	480	19	--	--	--	6.5	130	2.3
31	6.2	420	7.0	--	--	--	8.8	355	8.4
TOTAL	533.4	--	1734.0	531.3	--	1722.4	274.6	--	186.21

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8.2	290	6.4	4.5	9	.11	3.6	15	.15
2	7.6	120	2.5	4.5	44	.53	5.0	21	.28
3	7.6	55	1.1	4.5	49	.60	4.5	10	.12
4	7.6	49	1.0	4.5	77	.94	3.2	15	.13
5	6.0	39	.63	6.0	9	.15	6.0	19	.31
6	5.0	44	.59	6.0	12	.19	21	14700	1150
7	4.5	43	.52	5.0	22	.30	37	32100	5640
8	3.6	26	.25	4.0	9	.10	145	180000	73000
9	3.6	34	.33	3.6	10	.10	35	131000	12800
10	3.2	49	.42	4.0	11	.12	17	67000	3080
11	3.6	47	.46	3.6	11	.11	10	27000	729
12	4.0	46	.50	2.8	11	.08	8.8	7000	166
13	3.6	57	.55	3.2	7	.06	7.0	2520	48
14	4.5	10	.12	3.6	6	.06	5.0	1500	20
15	5.0	21	.28	4.0	7	.08	6.0	630	10
16	4.5	31	.38	4.5	8	.10	5.0	320	4.3
17	4.0	53	.57	3.6	18	.17	4.5	290	3.5
18	4.0	13	.14	5.0	16	.22	4.0	190	2.1
19	5.5	14	.21	5.0	13	.18	4.0	130	1.4
20	5.5	16	.24	4.0	10	.11	4.0	100	1.1
21	5.0	16	.22	5.0	12	.16	4.5	95	1.2
22	7.6	20	.41	5.5	12	.18	710	15000	34600
23	7.6	20	.41	5.5	9	.13	603	116000	206000
24	6.0	18	.29	5.0	12	.16	44	132000	15800
25	4.5	13	.16	4.5	11	.13	17	71000	3260
26	4.5	13	.16	4.5	17	.21	12	45000	1460
27	5.5	11	.16	4.0	5	.05	8.2	25000	554
28	5.5	19	.28	4.0	8	.09	6.0	7000	113
29	5.0	5	.07	3.6	8	.08	5.0	770	10
30	4.5	6	.07	3.6	8	.08	3.6	430	4.2
31	--	--	--	3.6	8	.08	--	--	--
TOTAL	156.8	--	19.42	134.7	--	5.66	1748.9	--	358458.79

09382000 PARIA RIVER AT LEES FERRY, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	6.0	260	4.2	3.2	280	2.4	53	63100	14200
2	5.5	220	3.3	27	188000	15400	42	92900	10500
3	5.0	154	2.1	8.2	69000	1530	36	64000	6510
4	3.6	127	1.2	3.6	55000	535	17	31000	1420
5	2.8	145	1.1	1.9	87000	446	16	37500	1620
6	2.5	145	.98	6.0	77700	1280	13	18000	632
7	2.5	144	.97	5.5	51000	757	11	7000	208
8	3.2	153	1.3	4.0	16000	173	12	12000	431
9	7.0	142	2.7	3.2	1800	16	12	13000	421
10	9.4	400	10	3.6	1600	16	9.8	17500	463
11	7.0	290	5.5	5.0	5000	68	7.6	7000	144
12	7.0	185	3.5	8.8	7200	171	6.2	2300	39
13	6.5	135	2.4	4.5	5700	69	8.0	1300	28
14	6.5	123	2.2	165	16700	33800	6.2	1220	20
15	6.5	133	2.3	502	106000	158000	4.2	540	6.1
16	6.0	130	2.1	44	44800	5760	4.0	205	2.2
17	15	9000	394	11	18000	535	4.0	195	2.1
18	7.0	12300	232	6.6	11000	196	4.5	193	2.3
19	3.6	6500	63	6.2	2000	33	556	243000	1080000
20	9.1	4300	106	136	64100	31700	386	278000	416000
21	6.0	1700	28	23	30500	1890	50	99000	13900
22	4.0	310	3.3	13	32500	1140	23	59000	3660
23	3.2	305	2.6	7.6	21000	431	18	34000	1650
24	2.2	340	2.0	5.8	7000	110	15	13000	527
25	6.2	1020	17	6.6	1300	23	13	2790	98
26	42	80400	18100	6.9	608	11	11	540	16
27	17	46500	2510	71	149000	165000	10	410	11
28	7.0	22000	416	300	727000	757000	10	350	9.5
29	6.0	8000	130	42	140000	15900	8.7	320	7.5
30	5.0	2120	29	21	90000	5100	8.3	300	6.7
31	3.6	810	7.9	21	65800	5060	--	--	--
TOTAL	223.9	--	22086.65	1473.2	--	1202152.4	1375.5	--	1552534.4

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	9755.5
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	4000438.53

09382000 PARIA RIVER AT LEES FERRY, ARIZ.--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .008 MM
OCT. 25...	1430	11.0	895	433000	1050000	15	17	20
AUG. 28...	0750	18.0	1020	1130000	3110000	7	9	--

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM	SUS. SED. FALL DIAM. % FINER THAN 1.00 MM	SUS. SED. FALL DIAM. % FINER THAN 2.00 MM
OCT. 25...	24	29	41	94	100	--	--
AUG. 28...	12	--	21	66	94	99	100

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.

LOCATION.--Lat 36°06'05", long 112°05'08", in sec. 5, T. 31 N., R. 3 E. (unsurveyed), Coconino County, at lower gaging station in Grand Canyon National Park, upstream from Kaibab Bridge, 0.4 mile upstream from Bright Angel Creek, 4.5 miles northeast of village of Grand Canyon, 26 miles downstream from Little Colorado River, 104 miles downstream from Glen Canyon Dam, and 267 miles upstream from Hoover Dam.

DRAINAGE AREA.--137,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1925 to November 1942, September 1943 to September 1972.
Water temperatures: October 1936 to October 1942, September 1943 to September 1972.
Sediment records: October 1925 to November 1942, September 1943 to September 1972 (discontinued).

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 1,300 micromhos Mar. 14; minimum daily, 800 micromhos Nov. 23, Dec. 12, 18, 23, 31.
Water temperatures: Maximum, 14.0°C on several days during October and July; minimum, 6.5°C on several days during December, January, and February.
Sediment concentrations: Maximum daily, 24,300 mg/l Oct. 5; minimum daily, 4 mg/l Feb. 22, Mar. 6.
Sediment discharge: Maximum daily, 927,000 tons Oct. 4; minimum daily, 25 tons Feb. 22.

Period of record:
Specific conductance: Maximum daily, 1,570 micromhos Jan. 30, 1968; minimum daily, 561 micromhos Sept. 3, 1965.
Water temperatures: Maximum, 23.0°C Sept. 4, 1967, Sept. 9, 10, 1968; minimum, 4.0°C Jan. 4, 1966, Jan. 7, 1968.
Sediment concentrations: Maximum daily, 47,100 mg/l Sept. 7, 1970; minimum daily, 4 mg/l Nov. 7, 1966, Feb. 22, Mar. 6, 1972.
Sediment discharge: Maximum daily, 1,830,000 tons Aug. 28, 1971; minimum daily, 25 tons Feb. 25, 1972.

REMARKS.--Because of the regulation of flow by Glen Canyon Dam since Mar. 13, 1963, and the subsequent filling of Lake Powell, extreme values for the period of record include only those obtained after July 31, 1965. Daily specific conductance values for water years 1971 and 1972 are field determinations.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
27...	1250	19100	9.9	0	88	22	99	4.7	180	0	260	76
NOV.												
27...	1230	17600	9.3	0	70	25	100	4.3	167	0	210	100
DEC.												
20...	1240	15800	9.3	20	68	24	81	4.2	161	0	210	70
JAN.												
14...	1325	20000	8.7	10	69	24	73	5.2	163	0	220	67
MAR.												
29...	1110	8130	9.4	10	83	30	110	4.6	189	0	290	100
APR.												
26...	1320	20500	9.6	20	81	28	94	5.6	177	0	270	77
MAY												
12...	1145	26800	9.4	20	76	28	88	3.9	172	0	250	70
JUNE												
15...	0935	25300	9.4	10	72	26	92	4.1	180	0	230	72
JULY												
27...	0805	28000	9.6	10	72	25	81	3.7	160	0	250	62
AUG.												
30...	1615	19200	9.0	20	76	24	78	3.8	161	0	260	58
SEP.												
29...	0700	22900	9.0	10	72	25	89	3.5	163	0	240	75

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ. --Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 27...	.3	.80	--	110	--	652	.89	310	160	2.4	1050	7.7
NOV. 27...	.4	.63	--	40	--	604	.82	280	140	2.6	1010	7.9
DEC. 20...	.1	.63	--	100	--	549	.75	270	140	2.2	891	8.0
JAN. 14...	.3	.66	--	100	--	550	.75	270	140	1.9	889	8.0
MAR. 29...	.3	.75	--	130	--	724	.98	330	180	2.6	1120	8.1
APR. 26...	.3	.79	--	120	--	656	.89	320	170	2.3	1020	7.9
MAY 12...	.3	.76	--	120	--	614	.84	300	160	2.2	987	7.8
JUNE 15...	.4	.66	--	100	--	597	.81	290	140	2.4	966	8.1
JULY 27...	.3	.76	--	120	--	586	.80	280	150	2.1	932	7.9
AUG. 30...	.4	.64	.03	100	596	591	.81	290	160	2.0	929	7.9
SEP. 29...	.4	.55	.00	120	632	597	.86	280	150	2.3	950	7.8

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	900	920	980	820	900	1000	1100	1000	1000	950	900	900
2	900	880	900	880	900	1020	1100	950	900	900	890	850
3	950	900	850	900	900	1020	1100	950	900	---	870	850
4	900	900	820	880	---	1000	1100	---	950	980	890	820
5	950	950	820	850	900	1050	1100	950	1000	1000	930	820
6	1000	900	900	---	950	1200	1020	950	920	1000	900	820
7	950	950	850	---	980	1200	1050	1000	900	900	910	850
8	950	900	900	---	1020	1100	1100	1000	950	900	920	880
9	980	850	850	---	980	1200	1120	---	920	900	900	900
10	900	880	850	900	980	1050	1100	980	1000	900	---	880
11	900	880	820	880	1000	1020	1200	950	980	900	980	900
12	950	900	800	820	1000	1050	1000	950	1000	900	900	820
13	900	850	900	850	950	1050	1000	900	---	---	900	850
14	900	880	900	850	920	1300	1020	950	920	950	980	880
15	900	900	850	900	1100	1100	---	980	950	900	890	900
16	900	---	880	900	1000	1050	---	1000	900	---	900	850
17	900	850	850	900	950	1100	---	1000	900	1000	890	900
18	900	850	800	900	1000	1100	---	950	900	900	900	900
19	900	820	820	900	---	1100	---	980	950	850	870	850
20	1200	880	880	900	---	1050	1000	1000	900	900	890	880
21	900	850	820	880	---	1120	1000	1000	1000	900	900	---
22	900	880	---	880	---	1050	1000	1000	1000	900	850	980
23	1000	800	800	950	---	1100	1000	1000	1000	980	900	880
24	900	850	850	950	---	1050	1000	950	920	950	890	900
25	900	850	900	900	---	1100	1000	---	950	900	960	850
26	1000	900	900	920	---	1100	1000	---	920	900	890	900
27	1000	1000	900	900	---	1100	1000	---	980	900	1020	900
28	820	900	1000	920	1050	1100	980	---	900	900	910	900
29	850	900	900	1000	1200	1100	1000	---	950	900	960	900
30	950	900	850	1000	---	1100	1000	---	900	950	900	920
31	920	---	800	1000	---	1100	---	---	---	900	900	---
AVG	931	885	865	901	---	1090	1040	---	943	922	910	877

YEARLY AVERAGE = 941

COLORADO RIVER MAIN STEM

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.0	12.0	10.5	10.0	10.5	10.0	8.0	8.0	7.0	6.5	10.0	9.5
2	13.0	12.0	10.5	10.0	10.0	10.0	8.0	8.0	7.0	6.5	9.5	9.0
3	13.0	12.0	11.0	10.5	10.0	10.0	8.0	8.0	7.0	6.5	9.5	9.0
4	14.0	13.0	11.0	11.0	10.0	10.0	8.0	7.0	6.5	6.5	10.0	9.5
5	14.0	13.5	11.5	11.0	10.0	10.0	8.0	7.0	7.0	6.5	10.0	10.0
6	13.5	13.5	11.5	11.5	10.0	10.0	8.0	8.0	8.0	7.0	10.5	10.0
7	13.5	13.5	12.0	11.5	10.0	9.5	8.0	8.0	8.0	8.0	11.5	10.5
8	14.0	13.5	12.0	11.5	9.5	9.5	8.0	8.0	8.0	8.0	11.5	11.0
9	14.0	13.5	12.0	11.5	9.5	9.5	8.0	8.0	8.0	8.0	11.5	10.0
10	14.0	13.5	12.0	12.0	9.5	9.0	8.0	8.0	8.0	8.0	10.0	10.0
11	14.0	14.0	12.0	12.0	9.5	9.0	8.0	8.0	8.0	7.0	10.0	9.5
12	14.0	13.5	12.0	12.0	9.5	9.5	8.0	8.0	8.0	7.0	10.5	9.5
13	14.0	13.5	12.0	12.0	9.5	9.5	8.0	8.0	8.0	7.0	10.5	10.0
14	14.0	13.5	12.0	12.0	9.5	9.0	8.0	8.0	8.0	8.0	11.0	10.0
15	13.5	13.5	12.0	12.0	9.0	9.0	8.0	8.0	8.0	8.0	10.5	10.0
16	13.5	13.0	12.0	11.5	9.0	9.0	8.0	8.0	8.0	8.0	10.0	9.5
17	13.0	12.0	11.5	11.5	9.0	9.0	8.0	7.0	8.5	8.0	10.5	10.0
18	12.0	11.0	11.5	11.0	9.0	9.0	8.0	7.0	8.5	8.5	10.5	10.0
19	11.5	11.0	11.0	11.0	9.0	9.0	8.0	8.0	9.0	8.5	10.5	10.0
20	12.0	11.5	11.0	10.5	9.0	8.5	8.0	8.0	9.0	9.0	10.5	10.5
21	11.5	11.0	10.5	10.5	9.0	8.5	8.0	8.0	9.5	9.0	11.0	10.5
22	12.0	11.5	11.0	10.5	9.0	9.0	8.0	8.0	9.5	9.0	10.5	10.0
23	12.0	12.0	11.5	11.0	9.5	9.0	8.0	8.0	10.0	9.5	10.0	10.0
24	13.0	12.0	11.5	11.0	9.5	9.0	8.0	8.0	10.0	9.5	10.0	9.5
25	13.0	12.0	11.0	11.0	9.5	9.0	8.0	7.0	---	9.0	10.0	10.0
26	12.0	12.0	11.0	10.5	9.5	9.5	8.0	8.0	---	9.0	10.0	10.0
27	12.0	11.5	11.0	10.5	9.5	9.5	8.0	8.0	---	9.0	10.0	9.5
28	12.0	11.5	10.5	10.5	9.5	9.0	8.0	7.0	---	9.0	10.0	9.0
29	11.5	11.0	10.5	10.5	9.0	8.5	7.0	7.0	---	9.0	9.0	9.0
30	11.0	10.0	10.5	10.5	8.5	8.0	7.0	7.0	---	---	9.0	8.5
31	10.5	10.0	---	---	8.0	6.5	7.0	6.5	---	---	9.0	8.5
MONTH	14.0	10.0	12.0	10.0	10.5	6.5	8.0	6.5	10.0	6.5	11.5	8.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	9.0	9.0	10.5	9.5	10.5	10.0	11.0	10.5	12.0	11.5	11.0	10.5
2	10.0	9.0	10.5	9.5	10.5	9.5	11.0	11.0	11.5	11.0	11.5	11.0
3	10.0	10.0	9.5	9.0	10.0	9.0	12.0	11.0	11.5	11.0	11.0	11.0
4	10.5	10.0	9.5	9.0	10.0	9.5	12.0	12.0	11.5	11.0	11.5	11.0
5	10.5	10.5	9.5	9.0	11.0	9.5	12.0	12.0	11.5	11.0	11.5	11.5
6	10.5	10.0	9.5	9.0	11.0	10.5	12.0	12.0	11.5	11.0	11.5	11.5
7	10.0	9.5	10.0	9.5	10.5	10.0	12.0	11.5	12.0	11.0	11.5	11.0
8	10.0	9.5	10.5	10.0	10.0	10.0	11.5	11.0	12.0	11.0	11.0	10.5
9	10.0	10.0	10.5	10.5	10.0	10.0	11.0	11.0	11.0	10.5	11.0	10.5
10	10.0	10.0	10.5	9.5	10.0	10.0	11.5	11.0	11.5	11.0	11.0	11.0
11	10.0	10.0	9.5	9.0	10.5	10.0	11.5	11.5	11.0	10.5	11.5	11.0
12	10.0	9.5	9.5	9.0	11.5	10.5	11.5	10.5	11.0	10.5	11.5	11.0
13	9.5	9.0	9.5	9.0	11.5	11.0	11.0	10.5	11.5	11.0	11.0	10.5
14	9.0	8.0	9.5	9.5	11.0	10.0	11.0	10.5	12.0	11.0	11.0	10.5
15	8.5	8.0	10.5	9.5	10.5	10.0	11.0	10.5	11.5	11.0	11.0	10.5
16	9.0	8.5	10.5	10.0	10.5	10.0	12.0	11.0	11.0	10.5	11.0	10.5
17	9.0	9.0	10.0	9.0	10.5	10.0	13.5	12.0	11.0	10.5	11.0	10.5
18	9.0	9.0	10.0	10.0	10.5	10.5	13.5	13.0	11.0	10.5	11.0	10.5
19	9.0	8.5	10.0	10.0	11.5	10.5	14.0	12.0	10.5	10.0	11.0	10.5
20	9.0	8.5	10.5	10.0	11.5	11.0	13.0	11.5	10.5	10.5	11.0	10.5
21	9.0	8.5	10.5	10.0	11.0	10.5	11.5	11.5	11.0	10.0	11.0	10.5
22	9.0	8.5	11.5	10.5	10.5	10.5	11.5	11.0	11.5	11.0	11.0	10.5
23	9.0	9.0	11.5	11.0	10.5	10.0	11.5	11.0	11.0	10.5	11.0	11.0
24	9.5	9.0	11.0	9.5	11.5	10.0	11.5	11.0	11.0	10.5	11.5	11.0
25	9.5	9.5	10.0	9.0	11.5	10.0	11.5	11.5	11.0	11.0	11.5	11.0
26	9.5	9.0	9.5	9.0	11.0	10.0	11.5	10.5	11.0	11.0	11.5	11.0
27	9.0	9.0	9.5	9.0	11.0	10.5	11.0	10.0	11.5	11.0	11.5	10.5
28	9.0	9.0	10.0	9.5	11.0	10.0	11.0	10.5	12.0	11.5	11.0	11.0
29	9.0	9.0	10.0	9.5	11.0	10.0	11.0	10.0	12.0	11.5	11.0	11.0
30	10.0	9.0	10.5	9.5	11.0	10.5	11.0	11.0	11.5	10.5	11.0	10.5
31	---	---	10.5	10.5	---	---	11.5	11.0	11.0	10.5	---	---
MONTH	10.5	8.0	11.5	9.0	11.5	9.0	14.0	10.0	12.0	10.0	11.5	10.5

YEARLY MAXIMUM = 14.0 YEARLY MINIMUM = 6.5

COLORADO RIVER MAIN STEM

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	12000	2100	68000	10400	1000	28100	11500	345	10700
2	11400	12500	423000	14200	1600	61300	15800	713	34300
3	12700	17600	617000	12900	1250	43500	17100	921	44100
4	13700	23400	927000	13000	1200	42100	18200	1290	66900
5	11400	24300	752000	13800	1300	48400	17300	1010	52000
6	9520	8000	206000	15800	1350	57600	11700	200	6320
7	10000	2750	83100	12300	800	26600	15100	541	24400
8	10800	2420	70100	8000	500	10800	15800	654	29500
9	9920	1400	39500	14200	900	3450C	17000	765	37200
10	11500	1240	42000	14800	700	28000	17500	798	41100
11	10700	510	14700	15700	1100	46600	17800	960	48900
12	11100	2100	62900	15600	896	42900	16900	737	35800
13	10600	2100	60100	15300	700	28900	11200	220	6650
14	11500	2200	68300	13900	650	24400	17900	925	47800
15	13100	2600	92000	8090	220	4810	17200	840	39000
16	11300	2100	64100	14900	710	28600	20000	1250	70500
17	10800	2200	64200	15300	810	33500	20500	1080	62300
18	8260	1600	35700	15800	890	38000	18200	660	33700
19	9780	1800	47500	16100	950	41300	17900	711	35900
20	11900	3740	130000	15600	620	26100	13500	375	13700
21	10800	5290	159000	14500	580	22700	19000	857	46400
22	10900	2990	88300	12500	420	14200	19900	974	54300
23	8340	2080	47100	16900	748	37100	18300	1030	53200
24	8230	12600	30400	15200	690	28300	16900	602	28600
25	5800	1140	19400	15100	913	40900	12600	200	6800
26	9990	2060	59100	8700	175	4110	7680	100	2070
27	13200	6270	265000	10800	366	13700	6790	90	1650
28	13500	4920	182000	8940	160	3860	13000	2710	113000
29	12100	4170	147000	5510	70	1040	18000	4750	238000
30	12800	2130	80300	12600	516	21300	18800	5190	271000
31	12900	1270	564000	--	--	--	22100	4490	278000
TOTAL	340540	--	5508800	396440	--	883220	501170	--	1833790

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	19100	2730	146000	16300	560	24600	5800	25	392
2	9590	1360	35300	17600	650	30900	6220	23	386
3	9060	844	21600	17200	370	17200	6860	15	278
4	15400	1430	62900	16000	260	11200	4980	11	148
5	19400	1610	86200	13900	330	12400	3700	7	70
6	20400	1500	82600	10100	140	3820	2940	4	32
7	17200	1300	60400	5680	43	659	4130	9	100
8	16300	1000	44000	9410	120	3050	4860	15	197
9	12200	900	29600	10300	135	3750	9050	130	3180
10	7130	100	1930	10900	235	6920	8800	78	1850
11	13400	572	23100	10700	190	5490	6500	36	632
12	17000	1040	50000	11100	170	5090	5040	20	272
13	16200	1010	46200	7900	604	15000	3490	15	141
14	15200	651	28000	4730	236	3540	6380	61	1050
15	14000	555	23300	8260	95	2120	6100	67	1100
16	13100	461	18300	7900	46	981	4350	34	399
17	6480	110	1920	7040	45	855	4580	26	322
18	14100	550	24600	5580	26	392	5720	20	309
19	14700	520	22500	4900	11	146	4980	14	188
20	13400	239	9290	3660	7	69	4230	14	160
21	14300	339	14600	3500	9	85	6240	42	708
22	14000	265	15400	2310	4	25	7100	39	748
23	11000	85	2520	3460	11	103	6400	28	484
24	8060	140	3050	4980	15	202	6600	19	339
25	12300	350	11600	5360	20	289	6590	17	302
26	15500	1630	75200	5160	25	348	6040	12	196
27	14800	750	30000	4830	10	130	5670	13	199
28	14600	550	21700	3480	8	75	6950	24	450
29	14600	500	19700	5380	35	508	7180	25	485
30	12100	330	10800	--	--	--	7910	49	1050
31	9010	100	2430	--	--	--	7940	37	793
TOTAL	423630	--	1024740	237620	--	149947	183330	--	16960

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	8180	38	839	10200	80	2200	17600	590	28000
2	7010	24	454	16900	410	18700	18400	773	41800
3	6130	15	248	17900	440	21300	18600	589	31100
4	6620	16	286	17700	340	16200	14900	350	14100
5	7210	41	798	17200	460	21400	8430	90	2050
6	11600	579	22300	16500	642	30100	15400	290	12100
7	10800	290	8460	12000	210	6800	15600	310	13100
8	9710	180	4720	9180	60	1490	13200	260	9270
9	7480	90	1820	14500	220	8610	14200	521	22100
10	6810	40	735	16800	447	22500	13700	834	33700
11	10100	260	7090	18200	894	47400	10700	290	8380
12	15600	190	8000	18600	803	39000	8260	220	4910
13	16500	510	22700	18400	460	22900	15100	350	14300
14	18000	1340	66700	14200	240	9200	16800	370	16800
15	22800	1400	86200	9450	70	1790	16800	450	20400
16	17400	1000	47000	17800	280	13500	17900	440	21300
17	13900	500	18800	17000	490	22500	17600	330	15700
18	19600	900	47600	14400	270	10500	13300	140	5030
19	16200	500	21900	11600	100	3130	9190	120	2980
20	19000	700	35900	9620	60	1560	13700	140	5180
21	19800	650	34700	7800	30	632	15300	200	8260
22	18100	450	22000	6230	20	336	15400	260	10800
23	14000	180	6800	12600	200	6800	16000	641	30500
24	11200	80	2420	18300	787	44900	14700	1630	71400
25	16700	600	27100	20300	620	34000	14900	850	34200
26	16000	530	22900	20000	440	23800	11900	800	25700
27	14500	330	12900	17600	300	14300	15600	550	23200
28	14100	300	11400	16800	260	11800	18200	480	23600
29	13300	220	7900	15200	190	7800	19400	550	28800
30	11700	120	3790	11500	100	3110	18100	410	20000
31	--	--	--	15400	873	41600	--	--	--
TOTAL	400050	--	554460	459880	--	509858	448880	--	598760

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	16200	270	11800	17700	450	21500	17200	1630	75700
2	12000	130	4210	17400	420	19700	16000	1300	56200
3	9180	85	2110	17400	370	17400	14300	620	23900
4	11400	100	3080	15200	250	10300	10800	130	3790
5	8590	35	812	16900	500	22800	10900	140	4120
6	11200	110	3330	13600	210	7710	14800	240	9590
7	14400	230	8940	9670	110	2870	15000	250	10100
8	15300	240	9910	18600	430	21600	15700	260	11000
9	13000	140	4910	17000	340	15600	16200	270	11800
10	9340	70	1770	18600	460	23100	14600	230	9070
11	14300	230	8880	19600	500	26500	11400	160	4920
12	17300	370	17300	18300	440	21700	16900	300	13700
13	17500	350	16500	14300	230	8880	16900	300	13700
14	17700	440	21000	8660	30	701	17400	370	17400
15	17400	210	9870	18100	440	21500	21200	1400	80100
16	12900	90	3130	18000	400	19400	20600	1200	66700
17	8490	50	1150	18000	400	19400	19100	1100	56700
18	15100	2850	131000	19600	500	26500	15100	290	11800
19	16600	7290	383000	20800	1500	84200	19900	1200	64500
20	15800	1800	76800	15400	800	33300	18400	1000	49700
21	15700	800	33900	11400	150	4620	16100	800	34800
22	16000	600	25900	19800	500	26700	15200	2050	84100
23	12300	700	23200	18900	460	23500	15800	1050	44800
24	8350	420	9470	171000	320	148000	14500	530	20700
25	14200	630	24200	15400	260	10800	9920	720	19300
26	16700	1160	57300	14200	230	8820	15300	360	14900
27	17800	850	40900	10900	130	3830	16200	340	14900
28	20700	1110	65900	9940	95	2550	16400	500	22100
29	17400	460	21600	172000	1900	882000	17400	510	24000
30	14600	380	15000	17400	1910	89700	17100	520	24000
31	11900	170	5460	17300	3050	156000	--	--	--
TOTAL	439350	--	1042332	811070	--	1781181	476320	--	898090

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	5118280
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	14802138

09402500 COLORADO RIVER NEAR GRAND CANYON, ARIZ.--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
DEC.									
24...	1310	10.0	21100	589	33600	1	6	85	100

09403000 BRIGHT ANGEL CREEK NEAR GRAND CANYON, ARIZ.

LOCATION.--Lat 36°06'11", long 112°05'44", in sec. 5, T. 31 N., R. 3 E. (unsurveyed), Coconino County, at gaging station in Grand Canyon National Park, 0.4 mile upstream from mouth, and 4 miles northeast of village of Grand Canyon.

DRAINAGE AREA.--101 sq mi.

PERIOD OF RECORD.--Chemical analyses: October 1952 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 27...	1200	17	6.9	0	35	20	4.0	1.1	217	0	7.0	4.0
FEB. 11...	1210	15	7.6	10	41	21	3.4	1.2	232	0	7.3	3.7
MAY 30...	1310	13	6.9	20	30	20	3.8	1.0	198	0	11	3.7
JULY 18...	1155	14	6.3	10	26	20	3.4	1.0	179	0	6.5	3.3

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 27...	.0	.09	30	185	.25	170	0	.1	344	8.0	10.6
FEB. 11...	.7	.11	30	201	.27	190	0	.1	354	8.2	5.0
MAY 30...	.0	.01	30	174	.24	160	0	.1	312	7.5	25.0
JULY 18...	.1	.01	20	155	.21	150	0	.1	299	7.2	27.0

09403780 KANAB CREEK NEAR FREDONIA, ARIZ.

LOCATION.--Lat 36°51'50", long 112°34'45", in SE¼ sec. 14, T. 40 N., R. 3 W. (unsurveyed), Coconino County, at gaging station in Kaibab Indian Reservation, at Nagles Crossing, 0.2 mile downstream from Johnson Wash, and 6.5 miles southwest of Fredonia.

DRAINAGE AREA.--1,085 sq mi.

PERIOD OF RECORD.--Specific conductance: October 1967 to September 1972.
Water temperatures: October 1967 to September 1972.
Sediment records: October 1963 to September 1972.

EXTREMES.--1971-72:
Sediment concentrations: Maximum daily, 233,000 mg/l Dec. 25; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 564,000 tons Sept. 19; minimum daily, 0 tons on many days.

Period of record:
Specific conductance: Maximum daily, 7,000 micromhos Apr. 16, 17, 23, 24, 1968; minimum daily, 550 micromhos Feb. 15, 1968.
Water temperatures: Maximum, 28.0°C June 8, 1968; minimum, freezing point on many days each year.
Sediment concentrations: Maximum daily, 233,000 mg/l Dec. 25, 1971; minimum daily, no flow on many days each year.
Sediment discharge: Maximum daily, 564,000 tons Sept. 19, 1972; minimum daily, 0 tons on many days each year.

REMARKS.--No flow for many days each month. Records of temperature and specific conductance on file at district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
NOV. 01...	1611	9.5	11	130	90	86	8.2	329	0	540	38

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
NOV. 01...	.4	1.5	1080	1070	1.47	690	430	1.4	1520	7.7	10.0

09403780 KANAB CREEK NEAR FREDONIA, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	4.0	2400	26	.40	880	.95
2	0	0	0	7.6	4010	82	.40	860	.93
3	0	0	0	.60	900	1.5	.50	860	1.2
4	0	0	0	2.4	2150	24	.30	940	.76
5	0	0	0	3.9	2300	24	.10	770	.21
6	0	0	0	1.7	1400	6.4	.25	930	.63
7	0	0	0	1.5	2000	8.1	1.3	1170	4.1
8	0	0	0	4.2	1800	20	.10	1080	.29
9	0	0	0	1.7	800	3.7	.05	1050	.14
10	0	0	0	.40	710	.77	.50	1140	1.5
11	0	0	0	.20	760	.41	1.4	900	3.4
12	0	0	0	.20	840	.45	.20	440	.24
13	0	0	0	1.5	1150	4.7	.60	160	.26
14	0	0	0	.40	560	.60	.20	100	.05
15	0	0	0	.10	450	.12	.10	100	.03
16	0	0	0	.20	700	.38	.10	1070	.29
17	.50	1870	2.5	1.9	1000	5.1	.20	670	.36
18	0	0	0	.60	700	1.1	.30	640	.52
19	0	0	0	.20	430	.23	.30	630	.51
20	0	0	0	.30	560	.45	.30	1100	.89
21	0	0	0	1.0	650	1.8	.50	1180	1.6
22	0	0	0	1.0	600	1.6	1.0	1760	4.8
23	0	0	0	.60	620	1.0	2.0	3080	17
24	76	40000	8210	.80	640	1.4	3.0	60000	486
25	37	23500	2350	1.0	760	2.1	370	233000	404000
26	6.6	18500	330	.10	610	.16	266	195000	155000
27	.40	6000	6.5	.10	580	.16	78	78300	20000
28	.10	550	.15	.10	570	.15	28	17000	1290
29	.10	700	.19	.40	560	.60	9.0	7000	170
30	4.6	5200	65	.30	660	.53	4.0	1800	19
31	5.0	5800	78	--	--	--	2.0	3700	20
TOTAL	130.30	--	11042.34	39.00	--	219.51	771.10	--	581025.66

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.5	1800	12	4.0	2400	42	0	0	0
2	3.0	5500	45	3.8	1800	18	0	0	0
3	13	2800	98	2.0	2400	13	0	0	0
4	3.0	1500	12	4.8	3400	44	0	0	0
5	2.0	1500	8.1	5.0	3100	42	0	0	0
6	1.0	1300	3.5	10	5500	149	0	0	0
7	1.0	1430	3.9	9.0	13500	328	0	0	0
8	1.0	1700	4.6	6.5	11000	193	0	0	0
9	1.0	2200	5.9	6.9	9700	181	0	0	0
10	1.0	1700	4.6	4.2	3700	42	0	0	0
11	2.5	2350	16	1.0	1300	3.5	0	0	0
12	5.0	3050	41	.80	750	1.6	0	0	0
13	11	4390	130	.60	750	1.2	0	0	0
14	10	6040	164	.40	500	.54	0	0	0
15	10	6000	162	.10	560	.15	0	0	0
16	9.6	10800	280	.05	450	.06	0	0	0
17	9.7	5200	136	0	0	0	0	0	0
18	7.1	3740	75	0	0	0	0	0	0
19	8.2	5250	116	0	0	0	0	0	0
20	6.3	5100	137	0	0	0	0	0	0
21	10	11200	302	0	0	0	0	0	0
22	13	9410	338	0	0	0	0	0	0
23	14	9600	363	0	0	0	0	0	0
24	8.6	5880	135	0	0	0	0	0	0
25	3.0	1800	15	0	0	0	0	0	0
26	5.6	4400	67	0	0	0	0	0	0
27	8.2	7790	219	0	0	0	0	0	0
28	7.0	3700	70	0	0	0	0	0	0
29	6.8	2900	53	0	0	0	0	0	0
30	6.6	1400	25	--	--	--	0	0	0
31	5.0	1900	26	--	--	--	0	0	0
TOTAL	195.7	--	3067.6	59.15	--	1059.05	0	--	0

09403760 KANAB CREEK NEAR FREDONIA, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	.90	2860	24
23	0	0	0	0	0	0	22	12400	847
24	0	0	0	0	0	0	.10	4200	1.1
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0
		--	--	0	0	0	--	--	--
TOTAL			0	0	--	0	23.00	--	872.1

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	.10	1000	.27
5	0	0	0	0	0	0	1.5	9000	36
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	.20	5000	2.7	0	0	0
14	0	0	0	1.1	10000	30	0	0	0
15	0	0	0	4.5	9000	109	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	.10	1630	4.2
19	0	0	0	0	0	0	514	208000	564000
20	0	0	0	0	0	0	170	130000	84400
21	0	0	0	0	0	0	6.8	36000	782
22	0	0	0	0	0	0	1.6	2200	11
23	0	0	0	0	0	0	.10	790	.21
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	3.6	9000	87	0	0	0
28	0	0	0	.10	2000	.54	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	0	0	0	0	0	0	--	--	--
TOTAL	0	--	0	9.50	--	229.24	694.20	--	649233.68

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	1921.95
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	1246749.18

09403780 KANAB CREEK NEAR FREDONIA, ARIZ. --Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
NOV. 01...	1610	10.0	9.2	7940	197	33	40

DATE	SUS. SED. FALL DIAM. % FINER THAN .008 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .031 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
NOV. 01...	50	59	61	68	95	100

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.
(Irrigation network station)

LOCATION.--Lat 36°53'27", long 113°55'30", in SW$\frac{1}{4}$SW$\frac{1}{4}$ sec. 4, T. 40 N., R. 15 W., Mohave County, at gaging station 0.4 mile downstream from Beaver Dam Wash, 0.4 mile upstream from Littlefield, and 36 miles upstream from waterline of Lake Mead at elevation 1,221 ft above mean sea level.

DRAINAGE AREA.--5,090 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1949 to September 1972.
Water temperatures: October 1947 to September 1972.
Sediment records: October 1947 to September 1968.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 18...	1310	273	13	330	53	200	17	257	0	930	250
NOV. 23...	1500	196	20	270	78	250	3.3	316	0	790	350
JAN. 06...	0900	202	--	290	83	240	5.2	355	0	800	340
FEB. 09...	1000	152	--	240	78	240	20	325	0	730	360
MAR. 16...	0930	56	--	330	100	260	28	351	0	960	360
APR. 18...	0930	76	21	360	100	280	28	327	0	1100	390
MAY 25...	1230	63	20	390	120	270	31	324	0	1200	390
JULY 11-13	--	64	21	280	120	270	19	63	0	1200	390
SEP. 12...	0900	64	21	360	110	260	28	336	0	1100	360

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

EXTREMES.--1971-72:

Specific conductance: Maximum daily, 3,600 micromhos June 7 (higher values may have occurred during period of no daily record in August and September); minimum daily, 1,260 micromhos Dec. 26.

Water temperatures: Maximum, 31.0°C on June 18 (higher temperatures may have occurred during period of no daily record in August and September); minimum, 4.0°C Jan. 4.

Period of record:

Specific conductance (1949-72): Maximum daily, 4,650 micromhos Aug. 21, 1966; minimum daily, 689 micromhos May 14, 15, 1969.

Water temperatures: Maximum, 33.5°C July 7, 1953; minimum, 1.5°C Jan. 4, 1949; Jan. 4, 1950.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 18...	.6	.56	.09	550	1920	2.61	1000	830	2.7	2630	7.2
NOV. 23...	.7	.70	.06	720	1920	2.61	990	740	3.4	2770	7.6
JAN. 06...	--	.69	.00	--	1940	2.64	1100	770	3.2	2850	7.6
FEB. 09...	--	.55	.06	--	1830	2.49	920	650	3.4	2730	7.9
MAR. 16...	--	.45	.03	--	2210	3.01	1200	950	3.2	3050	7.5
APR. 18...	1.0	.55	.00	1000	2440	3.32	1300	1000	3.4	3260	7.4
MAY 25...	1.1	.20	.03	1100	2580	3.51	1500	1200	3.1	3350	7.2
JULY 11-13	1.0	.16	.06	1100	2330	3.17	1200	1100	3.4	3070	8.0
SEP. 12...	1.3	.27	.03	1000	2410	3.28	1400	1100	3.1	3260	7.5

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 18...	1310	273	2500	7.7	14.5	--
NOV. 23...	1500	196	2800	7.8	15.0	8.4
JAN. 06...	0900	202	2800	7.6	6.0	12.1
FEB. 09...	1000	152	2800	8.0	11.0	10.2
MAR. 16...	0930	56	3100	7.8	16.0	8.6
APR. 18...	0930	76	3500	7.8	17.0	9.5
MAY 25...	1230	63	3500	7.3	25.0	8.2

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2950	2600	2850	2550	2800	2700	---	3350	3310	3200	---	---
2	3250	2700	2980	2610	2800	2700	3250	3100	3350	3250	---	---
3	3050	2850	2900	2550	2800	2950	3350	3200	3310	3200	---	---
4	3150	2720	3000	2600	2800	2900	3250	3250	3270	3200	---	---
5	3100	2800	2980	2800	2800	2800	3120	3320	3300	3200	---	---
6	3170	2900	3000	2850	2620	2800	3150	3240	3340	3150	---	---
7	3100	2900	3100	2700	2650	2900	3250	3200	3600	3150	---	---
8	3250	2850	3000	2630	2700	2800	3190	3230	3310	3250	---	---
9	3300	2900	2950	2610	2620	3100	3180	3250	3100	3210	---	---
10	3100	3000	2950	2650	2700	3000	3200	3200	3180	3300	---	---
11	3300	3000	2900	2700	2620	3080	3100	3210	3010	3250	---	---
12	3250	3000	2900	2700	2620	3000	3200	3240	3120	3250	---	---
13	3250	3000	2750	2690	2720	3150	3100	3210	3110	3250	---	---
14	3150	2880	2810	2690	2680	3200	3290	3390	3050	3300	---	---
15	3400	2920	2820	2700	2620	3250	3280	3310	3120	3300	---	---
16	3250	2500	2820	2650	2710	3250	3280	3300	---	3220	---	---
17	2800	2550	2900	2650	2790	3300	3150	3400	3120	3250	---	---
18	2680	2800	2900	2700	2700	3080	3250	3300	3200	3150	---	---
19	2820	2700	2810	2700	2650	3100	3300	3100	3210	3200	---	---
20	2980	2800	2710	2610	2700	3200	3390	3350	3200	3200	---	---
21	3050	2780	2750	2600	2590	3290	3350	3350	3100	3250	---	---
22	3020	2700	2700	2600	2590	3250	3280	3210	3100	3300	---	---
23	2900	2650	2690	2630	2610	3200	3310	3310	2850	3150	---	---
24	2900	2700	1900	2680	2600	3200	3310	3310	3230	3250	---	---
25	2950	2810	1480	2680	2620	3200	3250	3330	3420	3200	---	---
26	3000	2800	1260	2680	2670	3200	3350	3310	3400	3200	---	---
27	3050	2710	1390	2700	2700	3050	3300	3300	3390	3200	---	---
28	3080	2890	1950	2700	2700	3150	3200	3250	3120	3200	---	---
29	2950	2820	2020	2700	2700	3150	3200	3310	3210	3300	---	---
30	2800	2980	2250	2790	---	3110	3300	3250	3090	---	---	---
31	2800	---	2500	2750	---	3110	---	3300	---	3300	---	---
AVG	3060	2810	2610	2670	2690	3070	3250	3270	3210	3230	---	---

YEARLY AVERAGE = 2980

09415000 VIRGIN RIVER AT LITTLEFIELD, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	12.0	12.0	9.0	8.0	15.0	23.0	23.0	23.0	25.0	---	---
2	21.0	12.0	11.0	9.0	8.0	16.0	23.0	24.0	24.0	27.0	---	---
3	21.0	14.0	12.0	5.0	8.0	20.0	23.0	26.0	21.0	25.0	---	---
4	21.0	15.0	11.0	4.0	8.0	20.0	20.0	24.0	25.0	25.0	---	---
5	21.0	15.0	11.0	5.0	11.0	20.0	19.0	23.0	22.0	25.0	---	---
6	22.0	12.0	12.0	8.0	12.0	20.0	22.0	23.0	23.0	25.0	---	---
7	21.0	15.0	10.0	8.0	12.0	20.0	25.0	22.0	23.0	25.0	---	---
8	22.0	15.0	10.0	10.0	13.0	20.0	25.0	23.0	24.0	30.0	---	---
9	22.0	15.0	10.0	9.0	14.0	20.0	25.0	22.0	23.0	30.0	---	---
10	23.0	15.0	8.0	10.0	11.0	20.0	19.0	20.0	23.0	30.0	---	---
11	21.0	15.0	9.0	11.0	12.0	19.0	18.0	25.0	26.0	30.0	---	---
12	22.0	15.0	8.0	10.0	12.0	20.0	18.0	25.0	26.0	30.0	---	---
13	22.0	14.0	9.0	11.0	14.0	20.0	13.0	21.0	26.0	28.0	---	---
14	23.0	12.0	8.0	11.0	14.0	19.0	19.0	25.0	26.0	30.0	---	---
15	18.0	11.0	8.0	11.0	14.0	20.0	21.0	25.0	26.0	30.0	---	---
16	15.0	12.0	8.0	11.0	15.0	20.0	21.0	22.0	---	22.0	---	---
17	11.0	10.0	8.0	11.0	15.0	15.0	19.0	21.0	29.0	30.0	---	---
18	14.0	9.0	10.0	11.0	16.0	15.0	17.0	20.0	31.0	25.0	---	---
19	15.0	10.0	9.0	11.0	16.0	21.0	20.0	21.0	25.0	25.0	---	---
20	16.0	11.0	10.0	12.0	16.0	21.0	22.0	19.0	25.0	25.0	---	---
21	18.0	12.0	9.0	12.0	16.0	22.0	22.0	20.0	25.0	24.0	---	---
22	17.0	12.0	10.0	12.0	16.0	22.0	23.0	21.0	26.0	23.0	---	---
23	16.0	12.0	12.0	12.0	15.0	20.0	22.0	21.0	22.0	25.0	---	---
24	16.0	13.0	11.0	10.0	14.0	20.0	20.0	23.0	20.0	25.0	---	---
25	15.0	13.0	10.0	9.0	15.0	22.0	21.0	23.0	25.0	25.0	---	---
26	15.0	12.0	10.0	10.0	16.0	18.0	22.0	24.0	23.0	26.0	---	---
27	15.0	12.0	8.0	10.0	16.0	14.0	23.0	24.0	23.0	27.0	---	---
28	12.0	12.0	9.0	11.0	17.0	15.0	22.0	23.0	27.0	28.0	---	---
29	10.0	13.0	9.0	11.0	15.0	17.0	22.0	27.0	28.0	28.0	---	---
30	10.0	12.0	10.0	9.0	---	18.0	22.0	28.0	27.0	---	---	---
31	11.0	---	9.0	9.0	---	20.0	---	25.0	---	27.0	---	---
AVG	17.5	12.5	9.5	9.5	13.5	19.0	21.0	23.0	24.5	26.5	---	---

YEARLY AVERAGE = 17.5

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.

LOCATION.--Lat 36°00'58", long 114°44'13", in NE¼SW¼ sec. 3, T. 30 N., R. 23 W., Gila and Salt River meridian, on State line between Mohave County, Ariz., and Clark County, Nev., at gaging station midway between Hoover Dam intake towers.

DRAINAGE AREA.--167,800 sq mi, approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DEPTH (FT)	ELEVATION ABOVE MEAN SEA LEVEL (FT)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
NOV.										
02...	.0	1154	8.5	89	30	110	5.0	142	0	320
02...	10	1144	--	--	--	--	--	142	0	--
02...	25	1129	--	--	--	--	--	142	0	--
02...	75	1079	--	--	--	--	--	142	0	--
02...	125	1029	8.7	89	30	110	5.0	142	0	320
02...	175	979	8.0	90	32	100	5.0	157	0	320
02...	225	929	10	89	32	100	5.0	161	0	310
02...	250	904	10	89	32	100	5.0	161	0	310
02...	275	879	--	--	--	--	--	161	0	--
02...	325	829	--	--	--	--	--	161	0	--
02...	375	779	10	90	31	100	5.0	161	0	300
02...	430	724	--	--	--	--	--	163	0	--
30...	.0	1157	8.0	87	33	110	5.0	145	0	320
30...	10	1147	--	--	--	--	--	145	0	--
30...	25	1132	--	--	--	--	--	145	0	--
30...	75	1082	--	--	--	--	--	145	0	--
30...	125	1032	--	--	--	--	--	145	0	--
30...	175	982	8.7	90	32	110	5.0	155	0	320
30...	225	932	9.2	89	32	100	5.0	160	0	300
30...	252	905	8.9	89	32	100	4.0	161	0	300
30...	275	882	8.7	89	31	100	4.0	161	0	300
30...	325	832	--	--	--	--	--	161	0	--
30...	375	782	9.2	89	32	100	5.0	161	0	310
30...	432	725	--	--	--	--	--	163	0	--
DEC.										
29...	.0	1160	6.8	89	32	110	5.0	152	0	320
29...	10	1150	--	--	--	--	--	153	0	--
29...	25	1135	--	--	--	--	--	153	0	--
29...	75	1085	--	--	--	--	--	153	0	--
29...	125	1035	--	--	--	--	--	150	0	--
29...	175	985	7.2	89	32	110	5.0	150	0	320
29...	225	935	6.4	90	32	110	5.0	150	0	320
29...	252	908	6.8	90	30	110	5.0	155	0	320
29...	275	885	--	--	--	--	--	157	0	--
29...	325	835	7.8	90	30	100	4.0	157	0	310
29...	375	785	7.8	90	31	100	5.0	163	0	310
29...	433	727	--	--	--	--	--	166	0	--
FEB.										
03...	.0	1162	8.5	88	32	100	4.0	155	0	310
03...	10	1152	--	--	--	--	--	155	0	--
03...	25	1137	--	--	--	--	--	155	0	--
03...	75	1087	--	--	--	--	--	154	0	--
03...	125	1037	8.2	88	32	100	4.0	154	0	310
03...	175	987	--	--	--	--	--	154	0	--
03...	225	937	8.5	89	32	100	4.0	155	0	310
03...	260	902	8.0	88	32	100	4.0	155	0	310
03...	275	887	8.0	88	32	110	4.0	154	0	310
03...	325	837	--	--	--	--	--	154	0	--
03...	375	787	--	--	--	--	--	154	0	--
03...	425	737	8.0	88	32	110	4.0	154	0	310
03...	435	727	--	--	--	--	--	154	0	--
29...	.0	1161	8.0	88	32	110	4.0	157	0	310
29...	10	1151	--	--	--	--	--	156	0	--
29...	25	1136	--	--	--	--	--	156	0	--
29...	75	1086	--	--	--	--	--	156	0	--
29...	125	1036	--	--	--	--	--	156	0	--
29...	175	986	--	--	--	--	--	155	0	--
29...	225	936	7.4	89	32	110	4.0	156	0	310
29...	260	901	7.6	89	32	110	4.0	156	0	310
29...	275	886	7.4	89	32	110	4.0	159	0	310
29...	325	836	--	--	--	--	--	159	0	--
29...	375	786	--	--	--	--	--	159	0	--
29...	425	736	7.6	88	30	100	4.0	160	0	300
29...	438	723	--	--	--	--	--	160	0	--

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1940 to September 1972.

REMARKS.--Samples collected by Bureau of Reclamation and analyzed by the Metropolitan Water District of Southern California, LaVerne, Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
NOV.										
02...	95	1.3	729	.99	350	230	2.6	1140	8.0	19.0
02...	94	--	--	--	--	--	--	1150	8.0	19.0
02...	92	--	--	--	--	--	--	1150	8.1	19.0
02...	94	--	--	--	--	--	--	1150	8.1	19.0
02...	93	1.4	727	.99	350	230	2.6	1150	8.1	19.0
02...	94	2.2	729	.99	360	230	2.3	1160	7.9	15.5
02...	89	2.0	716	.97	350	220	2.3	1140	7.9	13.5
02...	88	1.9	715	.97	350	220	2.3	1140	8.0	13.0
02...	89	--	--	--	--	--	--	1140	8.0	13.0
02...	90	--	--	--	--	--	--	1140	8.0	12.0
02...	90	2.2	708	.96	350	220	2.3	1140	7.9	12.0
02...	90	--	--	--	--	--	--	1140	7.7	12.0
30...	95	1.4	731	.99	350	230	2.5	1150	8.1	16.0
30...	95	--	--	--	--	--	--	1150	8.1	16.5
30...	96	--	--	--	--	--	--	1150	8.0	16.5
30...	96	--	--	--	--	--	--	1150	8.0	16.5
30...	96	--	--	--	--	--	--	1150	8.0	16.5
30...	96	2.2	740	1.01	360	230	2.5	1150	7.8	16.0
30...	90	2.7	706	.96	350	220	2.3	1150	7.9	14.0
30...	90	2.3	706	.96	350	220	2.3	1140	7.9	13.5
30...	88	2.3	702	.95	350	220	2.3	1140	7.9	13.0
30...	88	--	--	--	--	--	--	1140	7.8	13.0
30...	89	2.0	716	.97	350	220	2.3	1140	7.8	13.0
30...	90	--	--	--	--	--	--	1150	7.6	12.5
DEC.										
29...	93	1.5	733	1.00	350	220	2.5	1160	8.1	14.0
29...	92	--	--	--	--	--	--	1160	8.1	14.0
29...	92	--	--	--	--	--	--	1160	8.1	14.0
29...	92	--	--	--	--	--	--	1160	8.2	14.0
29...	92	--	--	--	--	--	--	1160	8.2	13.0
29...	92	1.5	731	.99	350	230	2.5	1160	8.2	14.0
29...	97	1.6	736	1.00	360	240	2.5	1170	8.2	14.0
29...	93	1.5	733	1.00	350	220	2.6	1160	8.2	13.5
29...	91	--	--	--	--	--	--	1150	8.1	13.0
29...	87	1.5	708	.96	350	220	2.3	1150	8.1	12.0
29...	87	1.4	712	.97	350	220	2.3	1150	7.8	11.5
29...	87	--	--	--	--	--	--	1150	7.7	--
FEB.										
03...	95	1.8	716	.97	350	220	2.3	1140	8.0	12.0
03...	94	--	--	--	--	--	--	1140	8.0	12.0
03...	94	--	--	--	--	--	--	1140	8.0	12.0
03...	94	--	--	--	--	--	--	1140	8.0	12.0
03...	94	1.9	714	.97	350	220	2.3	1140	8.1	12.0
03...	94	--	--	--	--	--	--	1150	8.1	12.0
03...	94	1.5	715	.97	350	220	2.3	1150	8.1	12.0
03...	94	1.8	714	.97	350	220	2.3	1150	8.1	12.0
03...	95	1.8	725	.99	350	220	2.6	1150	8.1	12.0
03...	94	--	--	--	--	--	--	1150	8.1	12.0
03...	95	--	--	--	--	--	--	1150	8.0	12.0
03...	95	1.9	725	.99	350	220	2.6	1150	8.0	12.0
03...	96	--	--	--	--	--	--	1150	7.8	12.0
29...	93	1.7	724	.98	350	220	2.6	1150	8.1	13.5
29...	93	--	--	--	--	--	--	1150	8.2	13.0
29...	93	--	--	--	--	--	--	1150	8.1	12.5
29...	93	--	--	--	--	--	--	1150	8.1	12.0
29...	93	--	--	--	--	--	--	1150	8.0	12.0
29...	93	--	--	--	--	--	--	1150	8.0	12.0
29...	94	2.4	726	.99	350	220	2.5	1160	8.0	12.0
29...	94	2.2	726	.99	350	220	2.5	1160	8.0	12.0
29...	92	2.2	725	.99	350	220	2.5	1140	8.0	12.0
29...	90	--	--	--	--	--	--	1120	8.0	11.5
29...	90	--	--	--	--	--	--	1120	8.0	11.5
29...	88	2.2	699	.95	340	210	2.3	1120	8.0	11.5
29...	88	--	--	--	--	--	--	1120	8.0	11.5

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972--Continued

DATE	DEPTH (FT)	ELEVATION ABOVE MEAN SEA LEVEL (FT)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)
MAR.										
28...	.0	1157	5.6	86	34	110	5.0	162	0	310
28...	10	1147	--	--	--	--	--	160	0	--
28...	25	1132	--	--	--	--	--	161	0	--
28...	75	1082	--	--	--	--	--	161	0	--
28...	125	1032	--	--	--	--	--	160	0	--
28...	175	982	5.8	84	34	100	5.0	160	0	310
28...	225	932	6.2	85	32	110	5.0	168	0	310
28...	260	897	5.8	86	31	100	5.0	162	0	310
28...	275	882	--	--	--	--	--	163	0	--
28...	325	832	6.4	84	32	100	5.0	163	0	300
28...	375	782	6.2	84	31	100	5.0	162	0	300
28...	425	732	--	--	--	--	--	162	0	--
28...	437	720	--	--	--	--	--	162	0	--
APR.										
20...	.0	1155	7.2	90	32	110	4.0	160	0	320
20...	10	1145	--	--	--	--	--	159	--	--
20...	25	1130	--	--	--	--	--	159	0	--
20...	75	1080	7.0	88	32	110	4.0	159	0	310
20...	125	1030	--	--	--	--	--	159	0	--
20...	175	980	7.2	88	32	100	4.0	159	0	310
20...	225	930	--	--	--	--	--	160	0	--
20...	250	905	7.2	87	30	110	4.0	161	0	300
20...	275	880	7.2	87	30	100	4.0	161	0	290
20...	325	830	--	--	--	--	--	162	0	--
20...	375	780	--	--	--	--	--	162	0	--
20...	435	720	--	--	--	--	--	162	0	--
AUG.										
03...	.0	1155	7.6	79	32	110	5.0	131	0	320
03...	10	1145	--	--	--	--	--	131	0	--
03...	25	1130	7.2	79	32	110	5.0	129	0	320
03...	75	1080	7.3	87	30	100	5.0	154	0	310
03...	125	1030	7.6	90	31	100	5.0	157	0	310
03...	175	980	--	--	--	--	--	159	0	--
03...	225	930	7.6	88	30	100	5.0	160	0	300
03...	250	905	7.8	87	30	100	5.0	161	0	300
03...	275	880	--	--	--	--	--	161	0	--
03...	325	830	--	--	--	--	--	162	0	--
03...	375	780	8.0	87	30	100	5.0	163	0	290
03...	435	720	--	--	--	--	--	163	--	--
31...	.0	1156	7.6	88	25	110	4.0	122	0	320
31...	10	1146	--	--	--	--	--	122	0	--
31...	25	1131	7.2	87	25	110	4.0	120	0	310
31...	75	1081	7.8	85	30	100	4.0	149	0	300
31...	125	1031	7.8	91	30	110	4.0	160	0	310
31...	175	981	--	--	--	--	--	160	0	--
31...	225	931	8.2	88	31	100	4.0	161	0	300
31...	250	906	8.0	87	30	100	4.0	161	0	300
31...	275	881	--	--	--	--	--	161	0	--
31...	325	831	--	--	--	--	--	161	0	--
31...	375	781	10	87	28	100	4.0	162	0	290
31...	435	721	--	--	--	--	--	162	0	--

09421000 LAKE MEAD AT HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972--Continued

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS SOLVED NITRATE (NO3) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
MAR.										
28...	92	1.6	724	.98	360	230	2.5	1140	8.2	15.5
28...	92	--	--	--	--	--	--	1140	7.7	15.5
28...	92	--	--	--	--	--	--	1140	7.8	15.0
28...	92	--	--	--	--	--	--	1140	7.9	14.5
28...	92	--	--	--	--	--	--	1140	7.9	12.5
28...	90	1.2	709	.96	350	220	2.3	1130	7.8	12.0
28...	88	1.2	720	.98	340	200	2.6	1110	7.9	11.5
28...	86	2.0	706	.96	340	210	2.4	1090	7.9	11.0
28...	84	--	--	--	--	--	--	1090	7.9	11.0
28...	84	1.9	694	.94	340	210	2.4	1090	7.7	11.0
28...	82	1.4	689	.94	340	210	2.4	1070	7.7	11.0
28...	82	--	--	--	--	--	--	1070	7.7	11.0
28...	82	--	--	--	--	--	--	1070	7.9	11.0
APR.										
20...	94	1.3	737	1.00	360	230	2.5	1130	8.2	19.5
20...	94	--	--	--	--	--	--	1130	8.3	16.0
20...	94	--	--	--	--	--	--	1130	8.2	16.0
20...	92	1.0	722	.98	350	220	2.6	1130	8.2	14.5
20...	92	--	--	--	--	--	--	1140	8.1	12.5
20...	90	1.9	711	.97	350	220	2.3	1140	8.0	12.0
20...	90	--	--	--	--	--	--	1120	8.1	11.5
20...	90	1.7	709	.96	340	210	2.6	1090	8.0	11.5
20...	88	2.1	688	.94	340	210	2.4	1080	8.1	11.5
20...	88	--	--	--	--	--	--	1080	8.1	11.5
20...	86	--	--	--	--	--	--	1080	8.1	11.5
20...	86	--	--	--	--	--	--	1080	8.0	11.5
AUG.										
03...	96	.2	714	.97	330	220	2.6	1130	7.6	25.5
03...	95	--	--	--	--	--	--	1130	7.6	25.5
03...	95	.1	712	.97	330	220	2.6	1130	7.7	25.5
03...	92	1.0	708	.96	340	210	2.4	1140	7.5	18.5
03...	92	1.3	714	.97	350	220	2.3	1150	7.6	14.5
03...	91	--	--	--	--	--	--	1140	7.6	13.0
03...	91	1.7	702	.95	340	210	2.3	1140	7.5	12.0
03...	87	1.0	697	.95	340	210	2.4	1110	7.8	11.5
03...	87	--	--	--	--	--	--	1110	7.6	11.5
03...	87	--	--	--	--	--	--	1100	7.4	11.5
03...	87	.3	688	.94	340	210	2.4	1100	7.6	11.5
03...	86	--	--	--	--	--	--	1100	--	11.5
31...	96	.0	711	.97	320	220	2.7	1120	8.1	28.0
31...	96	--	--	--	--	--	--	1130	8.2	28.0
31...	98	.0	700	.95	320	220	2.7	1130	8.0	27.5
31...	94	1.2	695	.95	340	220	2.4	1130	7.6	20.0
31...	94	2.0	728	.99	350	220	2.6	1140	7.7	16.0
31...	92	--	--	--	--	--	--	1140	7.5	--
31...	92	1.7	704	.96	350	220	2.3	1130	7.7	12.0
31...	90	1.4	700	.95	340	210	2.4	1120	7.6	12.0
31...	88	--	--	--	--	--	--	1090	7.7	12.0
31...	88	--	--	--	--	--	--	1090	7.8	11.5
31...	86	1.4	686	.93	330	200	2.4	1090	7.5	11.5
31...	88	--	--	--	--	--	--	1090	7.7	11.5

09421500 COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV.

(Irrigation network station)

LOCATION.--Lat 36°00'55", long 114°44'16", in NE¼SW¼ sec. 3, T. 30 N., R. 23 W., Gila and Salt River meridian, Mohave County, Ariz., or in SW¼NE¼ sec. 29, T. 22 S., R. 65 E., Mount Diablo meridian, Clark County, Nev., 0.3 mile downstream from gaging station in powerhouse at downstream side of Hoover Dam.

DRAINAGE AREA.--167,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1939 to September 1972.
Water temperatures: October 1941 to September 1965.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)
OCT. 13...	0855	14220	9.5	10	89	31	110	4.2
NOV. 16...	0915	9620	9.4	10	92	31	110	4.6
DEC. 14...	1025	9960	9.2	10	88	31	110	5.1
JAN. 18...	1645	8320	12	0	91	29	130	7.0
FEB. 15...	0930	18450	8.9	0	88	31	110	5.9
MAR. 14...	0920	28000	9.0	40	85	31	110	5.3
APR. 18...	1730	25400	9.4	10	87	30	110	5.3
MAY 15...	1755	28060	9.4	10	90	29	100	4.9
JUNE 19...	1540	18960	9.3	20	87	30	110	5.0
JULY 18...	1110	25700	9.2	10	81	31	110	4.9
AUG. 21...	1330	15800	9.1	20	80	30	100	5.4
SEP. 26...	1040	14620	9.2	10	86	29	100	4.4

DATE	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT. 13...	171	0	320	92	.4	.75	.03	150	736
NOV. 16...	169	0	330	91	.4	.71	.03	150	--
DEC. 14...	159	0	330	94	.5	.55	.03	180	742
JAN. 18...	157	0	350	110	--	.52	.00	210	804
FEB. 15...	162	0	320	96	.4	.48	.00	150	744
MAR. 14...	168	0	300	91	.4	.63	.03	140	718
APR. 18...	165	0	300	91	--	.61	.09	--	720
MAY 15...	165	0	300	91	.3	.63	.00	100	702
JUNE 19...	174	0	310	92	.3	.60	.09	140	728
JULY 18...	165	0	310	91	.4	.58	.00	150	728
AUG. 21...	163	0	300	90	.5	.47	.12	150	764
SEP. 26...	163	0	300	87	.4	.65	.00	180	784

09421500 COLORADO RIVER BELOW HOOVER DAM, ARIZ.-NEV.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 13...	744	1.00	350	210	2.6	1160	7.8	13.0
NOV. 16...	755	1.03	360	220	2.5	1160	7.8	12.0
DEC. 14...	749	1.01	350	220	2.6	1160	7.8	13.5
JAN. 18...	809	1.09	350	220	3.0	1230	7.8	14.0
FEB. 15...	742	1.01	350	210	2.6	1170	8.0	12.0
MAR. 14...	717	.98	340	200	2.6	1120	7.3	11.0
APR. 18...	717	.98	340	210	2.6	1120	8.0	11.0
MAY 15...	709	.95	340	210	2.3	1090	8.2	11.0
JUNE 19...	732	.99	340	200	2.6	1130	7.6	12.0
JULY 18...	721	.99	330	190	2.6	1140	7.8	12.0
AUG. 21...	698	1.04	320	190	2.4	1120	7.9	12.0
SEP. 26...	699	1.07	330	200	2.4	1120	8.0	12.0

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 13...	0855	14220	1080	7.8	13.0	23.0	6.7
NOV. 16...	0915	9620	1150	7.6	12.0	8.0	8.0
DEC. 14...	1025	9960	1120	7.6	13.5	7.0	8.8
JAN. 18...	1645	8320	1220	7.5	14.0	13.0	9.0
FEB. 15...	0930	18450	1120	7.8	12.0	11.0	9.7
MAR. 14...	0923	28000	1020	7.8	11.0	19.0	9.0
APR. 18...	1730	25400	1120	7.9	11.0	19.0	8.5
MAY 15...	1755	28060	1140	7.8	11.0	31.0	8.0
JUNE 19...	1540	18960	1000	7.7	12.0	40.0	7.6
JULY 18...	1110	25700	1150	7.8	12.0	38.0	7.5

09423000 COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.

LOCATION.--Lat 35°11'30", long 114°34'17", in SE¼NE¼ sec. 1, T. 32 S., R. 66 E., Mount Diablo meridian, in Clark County, Nev., at gaging station on right bank 0.5 mile downstream from Davis Dam, 29 miles west of Kingman, Ariz., and 68 miles downstream from Hoover Dam.

DRAINAGE AREA.--169,300 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: July 1969 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 12...	1530	14060	9.3	10	84	33	120	4.4	150	0	340	98
NOV. 15...	1315	6950	9.0	10	86	32	120	4.9	154	0	340	99
DEC. 13...	1355	9600	9.1	0	88	32	120	5.9	158	0	330	100
JAN. 18...	1130	4790	9.3	10	90	32	110	6.9	165	0	330	96
FEB. 14...	1400	19090	8.5	0	87	32	110	5.2	166	0	330	98
MAR. 13...	1330	19450	8.5	10	--	32	110	5.4	166	0	320	86
APR. 17...	1300	22700	8.5	30	89	31	120	5.2	161	0	310	94
MAY 15...	1500	20020	8.2	10	90	30	110	5.1	161	1	310	95
JUNE 19...	0700	4420	9.0	20	88	30	100	5.5	168	0	310	95
JULY 17...	1620	26100	9.1	10	85	30	110	5.0	161	0	320	93
AUG. 01...	0730	9880	9.0	20	86	31	110	4.6	154	0	320	96

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 12...	.3	.37	170	690	765	.94	350	220	2.8	1170	7.9	20.0
NOV. 15...	.4	.40	160	784	769	1.07	350	220	2.8	1190	8.1	15.0
DEC. 13...	.4	.35	160	792	765	1.08	350	220	2.8	1200	8.0	11.5
JAN. 18...	.5	.79	160	800	760	1.09	360	220	2.5	1190	8.1	9.0
FEB. 14...	.4	.39	150	750	755	1.02	350	210	2.6	1190	8.2	9.5
MAR. 13...	.4	.46	150	808	--	1.10	--	--	--	1160	8.1	13.0
APR. 17...	.6	.46	--	852	740	1.16	350	220	2.8	1140	8.1	15.0
MAY 15...	.3	.44	120	744	731	1.01	350	210	2.6	1100	8.4	18.0
JUNE 19...	.4	.54	150	836	723	1.14	340	210	2.3	1150	7.8	16.0
JULY 17...	.4	.42	150	800	734	1.09	340	200	2.6	1140	7.8	17.5
AUG. 01...	.5	.37	160	796	735	1.08	340	220	2.6	1150	7.9	18.0

09423000 COLORADO RIVER BELOW DAVIS DAM, ARIZ.-NEV.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
OCT.								
13...	1530	14060	1040	8.1	20.0	34.0	7.8	--
14...	0745	4710	--	--	18.0	19.0	--	1
NOV.								
15...	1315	6950	1120	8.0	15.0	10.0	9.7	--
17...	0800	4590	--	--	15.0	10.5	--	1
DEC.								
13...	1355	9600	1200	8.0	11.5	6.5	10.2	--
15...	0825	4500	--	--	11.0	3.0	--	1
JAN.								
18...	1130	4790	1240	7.9	9.0	10.0	11.7	--
20...	0830	4570	--	--	8.0	4.0	--	1
FEB.								
14...	1400	19090	1220	8.1	9.5	20.5	10.6	--
16...	0830	5410	--	--	10.0	12.0	--	1
MAR.								
13...	1330	19450	1220	8.1	13.0	33.0	9.5	--
15...	0810	11140	--	--	14.0	19.0	--	1
APR.								
17...	1300	22700	1080	8.2	15.0	30.0	9.6	--
19...	0805	11000	--	--	15.0	13.0	--	1
MAY								
15...	1500	20020	1120	8.1	18.0	31.0	8.6	--
17...	0835	11950	--	--	15.0	26.0	--	1
JUNE								
19...	0700	4420	1100	7.6	16.0	23.0	7.8	--
21...	0825	11110	--	--	16.0	31.0	--	1
JULY								
17...	1620	26100	--	--	17.5	39.5	--	--

09424000 COLORADO RIVER NEAR TOPOCK, ARIZ.

LOCATION.--Lat 34°41'15", long 114°27'43", in SW¼NW¼ sec. 13, T. 15 N., R. 21 W., Mohave County, at gaging station on left bank in Mohave Canyon, 2.7 miles downstream from Topock, 39.5 miles upstream from Parker Dam, and 49 miles downstream from Davis Dam.

DRAINAGE AREA.--172,300 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1972.
Water temperatures: July 1952 to July 1962.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 01...	1030	5720	9.6	10	86	33	110	4.5	165	0	330	95
NOV. 02...	1310	5870	9.0	0	89	32	120	5.3	158	0	340	96
DEC. 14...	1130	9570	9.2	0	89	33	110	5.5	158	0	340	97
JAN. 07...	1215	11140	9.2	10	88	32	110	5.2	163	0	340	97
FEB. 01...	1115	7830	8.8	10	89	32	110	5.4	166	0	330	98
MAR. 01...	0835	12700	9.3	10	90	32	120	5.3	170	0	330	98
APR. 03...	1130	13700	8.5	10	90	32	110	5.5	161	0	330	96
MAY 01...	0900	13380	8.3	10	88	31	110	7.2	162	0	310	98
JUNE 01...	1000	13920	8.7	20	88	32	100	5.2	162	0	320	95
JULY 03...	0930	14140	9.1	10	84	30	110	4.9	160	0	320	93
AUG. 01...	1130	17350	8.6	0	84	31	110	4.7	153	0	320	96
SEP. 01...	0950	12400	9.0	40	85	30	110	4.7	156	0	310	96

09424000 COLORADO RIVER NEAR TOPOCK, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 01...	.2	.54	160	768	752	1.04	350	220	2.6	1180	7.9	--
NOV. 02...	.3	.43	160	764	771	1.04	350	220	2.8	1170	8.0	13.0
DEC. 14...	.4	.00	170	800	762	1.09	360	230	2.5	1200	8.0	--
JAN. 07...	.3	.41	150	776	764	1.06	350	220	2.6	1190	7.8	9.0
FEB. 01...	.3	.46	160	788	757	1.07	350	220	2.5	1190	8.2	9.0
MAR. 01...	.4	.47	70	--	771	1.05	360	220	2.8	1160	8.2	--
APR. 03...	.4	.38	160	766	753	1.04	360	220	2.5	1160	8.1	--
MAY 01...	.3	.46	150	732	735	1.00	350	210	2.6	1140	8.1	--
JUNE 01...	.7	.17	240	742	730	1.01	350	220	2.3	1160	8.0	--
JULY 03...	.6	.48	120	724	733	.98	330	200	2.6	1150	6.7	--
AUG. 01...	.4	.37	160	742	732	1.01	340	210	2.6	1160	7.8	20.0
SEP. 01...	.4	.27	140	--	723	.98	340	210	2.6	1130	7.8	20.0

09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.

LOCATION.--Lat 34°17'44", long 114°08'22", in NW¼NW¼ sec. 3, T. 2 N., R. 27 E., San Bernardino meridian, San Bernardino County, Calif., at gaging station, at Parker Dam, 13 miles northeast of Parker, Ariz., and 14 miles upstream from Headgate Rock Dam.

DRAINAGE AREA.--178,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1963 to September 1972.
Water temperatures: February 1954 to August 1970.
Prior to October 1968, published as 09428000.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
06...	1020	4550	8.6	10	82	33	110	5.1	148	0	340	98
NOV.												
03...	--	--	9.3	10	87	30	120	5.3	152	0	340	99
DEC.												
01...	1150	4300	9.4	10	84	32	110	5.7	159	0	340	98
JAN.												
05...	1030	4420	8.8	0	89	33	110	6.8	163	0	340	100
FEB.												
14...	1255	10000	9.8	10	89	32	120	5.9	167	0	340	100
MAR.												
05...	0830	5590	9.3	10	91	32	120	5.3	171	0	340	100
APR.												
02...	1025	18100	8.4	20	95	33	110	5.7	162	0	340	98
MAY												
07...	1100	18000	9.2	10	91	32	110	5.4	164	0	320	98
JUNE												
04...	1530	18200	8.5	20	89	30	110	5.1	169	0	320	96
AUG.												
06...	1115	15760	9.1	10	83	30	110	4.8	154	0	310	93
SEP.												
10...	1045	14000	8.7	10	80	30	110	5.3	142	0	300	95

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
06...	.4	.36	140	770	752	1.05	340	220	2.6	1160	7.7
NOV.											
03...	.3	.38	170	776	768	1.06	340	220	2.8	1180	8.0
DEC.											
01...	.5	.42	100	760	760	1.03	340	210	2.6	1170	8.1
JAN.											
05...	.4	.40	150	776	770	1.06	360	220	2.5	1190	8.1
FEB.											
14...	.5	.44	160	766	782	1.04	360	220	2.8	1180	8.1
MAR.											
05...	.4	.54	80	770	785	1.05	360	220	2.8	1180	7.9
APR.											
02...	.4	.76	160	756	774	1.03	370	240	2.5	1180	7.7
MAY											
07...	.4	.60	110	752	749	1.02	360	220	2.5	1160	7.9
JUNE											
04...	.4	.43	150	730	744	.99	350	210	2.6	1150	7.5
AUG.											
06...	.4	.26	140	712	717	.97	330	200	2.6	1130	7.7
SEP.											
10...	.4	.12	140	716	700	.97	320	210	2.7	1130	7.6

09427520 COLORADO RIVER BELOW PARKER DAM, ARIZ.-CALIF.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
NOV. 17...	1035	4510	1080	8.0	15.0	15.0	9.5	1
DEC. 15...	1150	6280	1140	8.0	12.0	9.0	10.7	1
JAN. 20...	1115	4380	1150	7.8	10.0	16.0	11.1	1
FEB. 16...	1130	12100	1100	8.0	10.5	18.0	10.7	1
MAR. 15...	1110	13290	980	8.0	17.0	26.0	9.3	1
APR. 19...	1115	13800	1030	8.0	18.0	22.0	9.2	1
MAY 17...	1125	16940	1080	7.9	22.0	34.0	8.5	3
JUNE 21...	1120	14830	970	7.9	26.0	39.0	7.9	1
JULY 19...	1030	14400	1060	7.9	25.0	37.0	7.7	1
SEP. 12...	1130	14200	1090	7.7	24.5	34.0	6.5	1

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, ARIZ.

LOCATION.--Lat 34°10'04", long 114°16'33", in SE¼NW¼ sec. 31, T. 10 N., R. 19 W., Yuma County, at gaging station at Arizona end of Headgate Rock Dam, on Colorado River Indian Reservation, 1.7 miles northeast of Parker, and 14 miles downstream from Parker Dam.

PERIOD OF RECORD.--Chemical analyses: October 1969 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-63 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
04...	1120	900	8.5	10	85	33	110	5.1	149	0	340	100
NOV.												
01...	--	--	9.2	10	87	31	120	5.7	153	0	350	100
DEC.												
06...	--	--	9.3	390	83	31	120	5.3	160	0	350	99
JAN.												
03...	--	--	9.0	0	91	33	120	7.2	163	0	350	100
FEB.												
14...	1340	--	9.7	10	89	33	120	5.7	159	0	340	110
MAR.												
06...	1200	--	9.2	10	96	32	120	5.3	171	0	340	99
APR.												
03...	1300	--	8.7	0	91	33	120	6.0	167	0	350	110
MAY												
01...	1300	--	8.1	10	92	32	110	5.5	164	0	320	99
30...	1200	--	8.5	10	90	33	110	4.9	173	0	320	96
JULY												
10...	1205	--	9.4	10	84	31	110	4.7	159	0	320	97
AUG.												
01...	1300	--	9.2	10	82	30	110	5.2	147	0	310	97
SEP.												
05...	1210	--	9.1	10	82	31	110	5.1	148	0	300	95

09428500 COLORADO RIVER INDIAN RESERVATION MAIN CANAL NEAR PARKER, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
04...	.4	.28	170	786	757	1.07	350	230	2.6	1170	7.8
NOV.											
01...	.3	.45	190	766	781	1.04	340	220	2.8	1190	7.9
DEC.											
06...	.5	.35	100	756	779	1.03	330	200	2.9	1170	8.0
JAN.											
03...	.4	.35	630	778	793	1.06	360	230	2.7	1190	8.0
FEB.											
14...	.5	.40	160	778	788	1.06	360	230	2.8	1200	7.9
MAR.											
06...	.4	.45	80	772	788	1.05	370	230	2.7	1180	8.1
APR.											
03...	.4	.50	170	796	804	1.08	360	230	2.7	1230	8.0
MAY											
01...	.6	.45	120	748	750	1.02	360	230	2.5	1170	8.2
30...	.2	.39	160	740	750	1.01	360	220	2.5	1160	8.1
JULY											
10...	.4	.35	140	736	736	1.00	340	210	2.6	1150	8.0
AUG.											
01...	.4	.18	160	724	717	.98	330	210	2.6	1130	8.1
SEP.											
05...	.4	.19	160	732	706	1.00	330	210	2.6	1140	7.5

09428510 POSTON WASTEWAY NEAR POSTON, ARIZ.

LOCATION. --Lat 33°59'58", long 114°26'41", in SW¼SE¼ sec. 28, T. 8 N., R. 21 W., Yuma County, at gaging station 0. 8 mile upstream from mouth, 2. 5 miles west of Poston, and 14 miles southwest of Parker.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT.												
04...	--	16	20	130	41	170	5.3	234	0	450	130	.4
NOV.												
01...	--	12	10	100	38	140	5.5	184	0	380	95	.4
DEC.												
06...	--	20	60	150	46	210	5.4	269	0	530	190	.7
JAN.												
03...	--	17	10	140	44	180	7.5	197	0	510	170	.5
FEB.												
14...	1200	11	10	97	33	130	5.7	183	0	370	110	.6
MAR.												
06...	1140	19	10	140	44	200	6.0	272	0	500	180	.5
APR.												
03...	1200	11	10	110	37	140	6.0	192	0	340	130	.4
MAY												
01...	1130	20	10	150	48	210	6.0	279	0	540	190	.5
30...	1120	12	10	110	38	140	5.2	208	0	390	130	.3
JULY												
10...	1110	19	10	150	45	190	5.6	268	0	510	180	.5
AUG.												
01...	1150	19	10	150	47	200	5.3	275	0	510	180	.5
SEP.												
05...	1125	18	10	140	45	190	5.4	253	0	470	170	.5

09428510 POSTON WASTEWAY NEAR POSTON, ARIZ.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 04...	.44	190	1140	1060	1.55	490	300	3.3	1620	7.8	--
NOV. 01...	.28	190	878	863	1.19	410	260	3.0	1350	8.0	--
DEC. 06...	.33	190	1280	1290	1.74	560	240	3.8	1810	7.8	--
JAN. 03...	.42	230	1200	1170	1.63	530	370	3.4	1750	8.1	--
FEB. 14...	.38	180	868	849	1.18	380	230	2.9	1290	8.1	11.0
MAR. 06...	.25	180	1210	1220	1.65	530	310	3.8	1770	7.8	--
APR. 03...	.49	190	940	931	1.27	430	270	2.9	1390	8.2	--
MAY 01...	.50	240	1320	1300	1.80	570	340	3.8	1930	8.3	--
30...	.29	190	948	929	1.29	430	260	2.9	1430	8.0	--
JULY 10...	.99	260	1280	1240	1.74	560	340	3.5	1820	7.8	--
AUG. 01...	.27	260	1280	1250	1.74	570	340	3.7	1860	7.9	--
SEP. 05...	.14	250	1210	1160	1.65	530	330	3.6	1760	7.9	--

09429000 PALO VERDE CANAL NEAR BLYTHE, CALIF.

LOCATION (revised).--Lat 33°43'55", long 114°30'40", in SE¼NE¼NW¼ sec. 19, T. 5 S., R. 24 E., San Bernardino meridian, Riverside County, at gaging tation at canal intake structure on west side of Palo Verde Dam, 10 miles northeast of Blythe, and 44 miles downstream from eadgate Rock Dam.

PERIOD OF RECORD.--Chemical analyses: March 1970 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
04...	0500	--	8.7	10	87	34	120	5.3	150	0	350	100
NOV.												
01...	--	--	9.4	10	91	35	130	5.7	159	0	360	110
DEC.												
06...	--	--	9.6	0	90	32	120	5.7	171	0	360	100
JAN.												
03...	--	--	9.9	0	89	33	120	6.8	172	0	360	100
FEB.												
14...	1030	--	9.8	40	89	32	120	5.7	168	0	340	100
MAR.												
06...	1000	--	9.4	10	90	32	120	5.5	171	0	330	100
APR.												
03...	1100	--	8.3	10	95	34	120	5.9	166	0	340	110
MAY												
01...	1030	--	8.1	10	92	31	110	5.5	165	0	330	100
30...	0950	--	10	20	92	33	110	5.0	167	0	330	99
JULY												
10...	1010	1810	9.5	0	84	32	110	4.8	160	0	320	96
AUG.												
01...	1050	1300	9.2	10	84	31	110	5.2	153	0	320	98
SEP.												
05...	1020	1420	9.3	10	84	31	110	5.8	152	0	300	96

09429000 PALO VERDE CANAL NEAR BLYTHE, CALIF. --Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT.												
04...	.4	.31	160	796	781	1.08	360	230	2.8	1190	7.9	19.0
NOV.												
01...	.3	.47	170	800	822	1.09	370	240	2.9	1240	8.1	--
DEC.												
06...	.6	.35	110	800	804	1.09	360	220	2.8	1210	8.2	--
JAN.												
03...	.5	.39	160	828	805	1.13	360	220	2.8	1220	8.2	--
FEB.												
14...	.4	.42	160	780	782	1.06	350	220	2.8	1200	8.1	--
MAR.												
06...	.4	.47	80	772	774	1.05	360	220	2.8	1180	8.1	--
APR.												
03...	.4	.62	160	780	798	1.06	380	240	2.7	1220	8.0	19.0
MAY												
01...	.5	.41	110	766	760	1.04	360	220	2.5	1180	8.1	--
30...	.3	.44	170	766	764	1.04	370	230	2.5	1180	8.1	20.0
JULY												
10...	.4	.40	180	736	737	1.00	340	210	2.6	1150	8.2	--
AUG.												
01...	.5	.30	140	732	735	1.00	340	210	2.6	1150	8.1	--
SEP.												
05...	.4	.33	170	752	713	1.02	340	210	2.6	1160	7.8	--

09429030 PALO VERDE DRAIN NEAR PARKER, ARIZ.

LOCATION.--Lat 33°45'25", long 114°29'48", in NE¼SW¼ sec. 24, T. 5 N., R. 22 W., Yuma County, at bridge, 0.5 mile above mouth, 0.5 mile northeast of Palo Verde Dam, 9 miles north of Ehrenberg, and 31 miles southwest of Parker.

PERIOD OF RECORD.--October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.											
04...	--	23	10	150	46	200	4.5	250	0	480	180
NOV.											
01...	--	23	10	140	44	190	5.0	238	0	500	200
DEC.											
06...	--	22	10	140	42	190	4.5	244	0	490	200
JAN.											
03...	--	22	20	140	42	190	6.3	192	0	490	190
FEB.											
14...	1130	23	10	140	41	180	5.2	236	0	460	190
MAR.											
06...	1100	24	10	140	43	200	5.5	247	0	490	210
APR.											
03...	1115	22	10	150	43	180	5.1	230	0	490	190
MAY											
01...	1050	22	10	150	45	190	4.5	239	0	490	200
30...	1030	21	10	150	44	190	4.2	245	0	490	200
JULY											
10...	1035	24	10	140	42	180	4.0	230	0	470	180
AUG.											
01...	1115	22	10	140	44	180	5.2	217	0	480	190
SEP.											
05...	1050	23	20	150	45	200	4.6	244	0	490	200

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
04...	.4	.14	200	1270	1210	1.73	560	360	3.7	1860	7.8
NOV.											
01...	.3	.21	200	1200	1220	1.63	530	340	3.6	1780	7.8
DEC.											
06...	.5	.23	140	1210	1210	1.65	520	320	3.6	1750	8.0
JAN.											
03...	.4	.27	190	1190	1180	1.62	520	360	3.6	1740	7.8
FEB.											
14...	.5	.21	190	1160	1160	1.58	520	320	3.4	1720	8.1
MAR.											
06...	.4	.20	120	1220	1240	1.66	530	320	3.8	1790	7.9
APR.											
03...	.3	.35	200	1190	1200	1.62	550	360	3.3	1750	7.9
MAY											
01...	.4	.23	160	1220	1220	1.66	560	360	3.5	1810	8.0
30...	.3	.02	220	1240	1220	1.69	560	350	3.5	1830	8.0
JULY											
10...	.5	.06	200	1150	1150	1.56	520	330	3.4	1710	7.9
AUG.											
01...	.4	.04	190	1210	1170	1.65	530	350	3.4	1760	8.1
SEP.											
05...	.4	.02	220	1300	1230	1.77	560	360	3.7	1850	8.1

09429060 LOWER MAIN DRAIN NEAR PARKER, ARIZ.

LOCATION.--Lat 33°45'40", long 114°29'05", in SW¼NW¼ sec. 19, T. 5 N., R. 21 W., Yuma County, at gaging station, 2.8 miles above outlet to Colorado River, and 31 miles south of Parker.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 04...	--	15	10	130	47	230	5.5	234	0	500	200
NOV. 01...	--	16	10	150	51	260	5.9	224	0	570	270
DEC. 05...	--	15	0	130	45	220	6.0	235	0	510	230
JAN. 03...	--	13	10	130	44	190	7.6	210	0	500	210
FEB. 14...	1125	14	10	120	41	200	6.0	225	0	440	200
MAR. 06...	1110	17	10	150	50	270	6.8	270	0	550	280
APR. 03...	1120	14	10	140	44	230	6.3	234	0	500	230
MAY 01...	1100	17	10	160	53	290	6.9	264	0	590	310
30...	1035	14	10	120	48	240	5.6	215	0	510	240
JULY 10...	1040	22	20	170	59	390	6.1	282	0	700	440
AUG. 01...	1125	19	10	150	56	310	4.6	241	0	620	360
SEP. 05...	1055	18	40	150	52	300	6.2	263	0	560	310

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 04...	.5	.43	290	1330	1250	1.81	520	330	4.4	1940	8.0
NOV. 01...	.5	.46	340	1430	1440	1.94	530	400	4.7	2120	8.0
DEC. 06...	.7	.39	230	1280	1270	1.74	510	320	4.2	1870	8.0
JAN. 03...	.5	1.1	320	1230	1200	1.67	510	330	3.7	1800	7.7
FEB. 14...	.6	.39	240	1160	1130	1.58	470	280	4.0	1730	8.1
MAR. 06...	.6	.71	240	1450	1460	1.97	580	360	4.9	2130	7.8
APR. 03...	.5	.44	280	1290	1280	1.75	530	340	4.3	1950	8.2
MAY 01...	.7	.71	340	1590	1560	2.16	620	400	5.1	2350	8.1
30...	.4	.19	310	1340	1280	1.82	500	320	4.7	1990	8.0
JULY 10...	.8	.43	580	1970	1930	2.68	670	440	6.6	2860	8.1
AUG. 01...	.7	.32	410	1700	1640	2.31	600	410	5.5	2530	8.1
SEP. 05...	.7	.37	400	1590	1530	2.16	590	370	5.4	2370	8.1

09429130 PALO VERDE IRRIGATION DISTRICT OLIVE LAKE DRAIN NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°40'36", long 114°32'09", in SW¼SW¼ sec. 1, T. 6 S., R. 23 E., San Bernardino meridian, Riverside County, 0.3 mile upstream from mouth, and 5 miles northeast of Blythe.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1970 (partial-record station), October 1970 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 01...	0930	--	19	20	140	41	160	5.7	287	0	420	130
NOV. 01...	0930	--	19	0	140	41	180	6.0	287	0	460	140
DEC. 01...	1025	--	18	0	140	42	160	6.7	292	0	430	150
JAN. 04...	1430	--	19	10	150	44	160	5.5	298	0	400	150
FEB. 04...	1300	--	16	10	140	40	170	6.0	271	0	440	140
MAR. 09...	1410	--	20	10	160	41	170	5.9	309	0	470	160
APR. 27...	1045	--	18	20	140	40	160	5.8	285	0	440	150
MAY 01...	0830	12	18	10	140	41	160	7.0	285	0	410	140
JUNE 05...	1700	--	18	10	140	39	150	5.3	278	0	410	130
JULY 01...	0820	--	19	10	140	40	150	5.7	283	0	440	140
AUG. 07...	1415	--	18	30	140	41	150	5.0	277	0	440	140
SEP. 18...	1150	--	18	10	140	41	160	5.4	291	0	430	140

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 01...	.2	.34	200	1100	1060	1.50	520	280	3.1	1600	7.6	20.0
NOV. 01...	.3	.28	190	1090	1130	1.48	520	280	3.4	1620	7.8	17.5
DEC. 01...	.4	.28	200	1080	1090	1.47	520	280	3.0	1620	7.9	17.0
JAN. 04...	.3	.20	200	1140	1160	1.55	560	310	3.0	1670	8.1	--
FEB. 04...	.3	.23	190	1040	1090	1.41	510	290	3.3	1580	8.2	13.0
MAR. 09...	.4	.19	120	--	1180	1.60	570	310	3.1	1660	8.0	23.0
APR. 27...	.5	.13	200	1090	1100	1.48	510	280	3.1	1610	7.9	--
MAY 01...	.4	.12	200	1070	1060	1.46	520	280	3.1	1600	7.7	--
JUNE 05...	.4	.11	190	1040	1030	1.41	510	280	2.9	1570	7.1	26.0
JULY 01...	.5	.31	190	1090	1080	1.48	510	280	2.9	1580	7.6	20.5
AUG. 07...	.6	.13	200	1060	1070	1.44	520	290	2.9	1600	7.5	27.0
SEP. 18...	.4	.04	190	1080	1080	1.47	520	280	3.1	1610	7.7	--

09429188 COLORADO RIVER AT TAYLOR FERRY, NEAR BLYTHE, CALIF.

LOCATION.--Lat 33°26'03", long 114°37'35", in SE¼ sec. 36, T. 8 S., R. 22 E., San Bernardino meridian, Riverside County, at gaging station, at site of old Taylor Ferry, 2.5 miles upstream from Cibola Bridge, 12 miles south of Blythe, Calif., 28 miles downstream from Palo Verde Dam, and 62 miles upstream from Imperial Dam.

DRAINAGE AREA.--183,700 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: April 1970 to September 1972.

REMARKS.--Gaging station operated by Bureau of Reclamation.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 04...	--	9.5	10	91	35	130	5.3	159	0	370	90
NOV. 01...	--	11	10	100	37	140	5.6	176	0	370	120
DEC. 06...	--	10	10	95	32	130	5.5	192	0	360	120
JAN. 03...	--	9.4	10	93	34	120	7.0	169	0	350	110
FEB. 14...	1000	10	10	87	33	120	5.7	170	0	340	110
MAR. 06...	0930	10	10	95	32	130	5.9	179	0	340	120
APR. 03...	1000	8.7	10	94	34	120	5.8	168	0	360	110
MAY 01...	0930	9.0	10	97	34	120	5.5	174	0	340	110
30...	0830	9.1	10	96	33	120	5.0	171	0	350	110
JULY 10...	0840	10	20	88	33	120	4.7	168	0	340	110
AUG. 01...	0925	9.9	10	89	32	130	4.9	161	0	330	110
SEP. 05...	0910	9.9	40	89	32	120	5.2	162	0	330	110

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 04...	.4	.29	170	830	811	1.13	370	240	2.9	1250	8.1
NOV. 01...	.3	.31	180	838	872	1.14	400	260	3.0	1310	8.1
DEC. 06...	.5	.35	100	836	849	1.14	370	210	2.9	1280	8.2
JAN. 03...	.5	.35	160	822	809	1.12	370	230	2.7	1240	8.1
FEB. 14...	.5	.43	160	800	792	1.09	350	210	2.8	1230	8.3
MAR. 06...	.4	.47	90	816	824	1.11	370	220	2.9	1250	7.8
APR. 03...	.4	.49	160	794	818	1.08	370	240	2.7	1230	8.2
MAY 01...	.4	.38	130	820	798	1.12	370	230	2.7	1250	8.1
30...	.3	.30	180	800	809	1.09	380	240	2.7	1230	8.2
JULY 10...	.4	.33	170	788	790	1.07	360	220	2.8	1210	8.0
AUG. 01...	.5	.22	140	770	787	1.05	350	220	3.0	1200	8.2
SEP. 05...	.4	.12	150	782	777	1.06	350	220	2.8	1210	7.8

09429220 PALO VERDE IRRIGATION DISTRICT OUTFALL DRAIN NEAR PALO VERDE, CALIF.

LOCATION.--Lat 33°21'41", long 114°43'20", in SE¼SE¼ sec. 26, T. 9 S., R. 21 E., San Bernardino meridian, Imperial County, at gaging station, at State Highway 78 bridge, 3.3 miles upstream from mouth, and 5 miles south of Palo Verde.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 04...	--	23	10	150	46	450	6.0	335	0	610	440
NOV. 01...	--	22	0	150	46	450	6.2	270	0	640	460
DEC. 06...	--	21	10	140	41	390	6.4	304	0	580	400
JAN. 03...	--	21	10	150	46	430	8.9	308	0	650	450
FEB. 14...	0805	22	20	140	44	410	6.8	310	0	580	400
MAR. 06...	0730	23	10	140	43	460	7.3	331	0	620	450
APR. 03...	0740	21	10	150	43	420	7.1	316	0	630	410
MAY 01...	0715	21	20	140	47	440	6.8	322	0	630	440
30...	0635	22	10	140	47	450	6.0	316	0	630	440
JULY 10...	0730	23	10	130	44	410	5.7	205	0	650	410
AUG. 01...	0715	22	10	140	44	420	5.9	324	0	600	420
SEP. 05...	0720	22	10	140	44	410	6.3	328	0	580	400

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 04...	1.2	.58	620	1920	1890	2.61	560	290	8.2	2910	7.9
NOV. 01...	1.1	.58	630	1890	1910	2.57	560	340	8.2	2890	8.0
DEC. 06...	1.2	.55	490	1760	1730	2.39	520	270	7.5	2660	8.0
JAN. 03...	1.2	.51	620	1880	1910	2.56	560	310	7.9	2880	8.0
FEB. 14...	1.2	.79	560	1760	1760	2.39	530	280	7.7	2710	8.2
MAR. 06...	1.2	.47	560	1890	1910	2.57	530	260	8.7	2880	7.9
APR. 03...	1.2	.55	610	1820	1840	2.48	550	290	7.8	2800	8.1
MAY 01...	1.3	.49	580	1890	1890	2.57	540	280	8.2	2900	8.0
30...	1.1	.20	630	1860	1890	2.53	540	280	8.4	2860	7.9
JULY 10...	.4	.45	590	1770	1780	2.41	510	340	7.9	2720	8.2
AUG. 01...	1.2	.37	560	1850	1810	2.52	530	260	7.9	2830	7.8
SEP. 05...	1.2	.30	570	1790	1770	2.43	530	260	7.7	2720	7.9

09429225 ANDERSON DRAIN NEAR PALO VERDE, CALIF.

LOCATION.--Lat 33°21'19", long 114°43'00", in SW¼ sec. 36, T. 9 S., R. 21 E., San Bernardino meridian, Imperial County, 0.1 mile upstream from pump into Outfall Drain, and 5.5 miles south of Palo Verde.

PERIOD OF RECORD.--Chemical analyses: Water year 1969 (partial-record station), October 1969 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT.												
01...	1430	26	20	140	69	1300	6.4	627	0	1300	1200	1.6
NOV.												
01...	1720	26	10	120	64	1300	7.8	613	0	1100	1300	2.0
DEC.												
01...	1410	25	20	150	72	1400	9.8	605	0	1300	1500	2.2
JAN.												
03...	1530	27	30	180	75	1400	7.8	588	0	1300	1500	1.9
FEB.												
08...	1540	26	40	120	57	1600	8.0	669	0	1300	1600	2.7
MAR.												
01...	1345	27	20	140	71	2000	9.4	685	0	1500	1900	2.3
APR.												
27...	1230	23	30	120	56	920	11	624	0	940	790	2.0
MAY												
01...	1640	22	20	110	47	840	11	568	0	830	750	2.2
JUNE												
05...	1610	26	170	100	48	1100	8.4	597	0	960	920	.0
JULY												
07...	1130	27	30	110	54	1500	8.5	659	0	1200	1400	2.8
AUG.												
07...	1530	26	40	120	58	1600	7.4	655	0	1298	1600	3.1
SEP.												
02...	1705	19	40	120	51	770	13	391	0	810	740	1.2

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.											
01...	.20	370	4390	4350	5.77	630	120	22	6860	7.7	22.0
NOV.											
01...	.43	2200	4280	4230	5.82	560	60	24	6690	7.8	18.0
DEC.											
01...	.62	2000	--	4760	6.47	670	170	24	7220	7.7	16.0
JAN.											
03...	.32	1900	4620	4780	6.28	760	280	22	7010	7.8	--
FEB.											
08...	.04	2500	5020	5050	6.83	530	0	30	7700	8.0	--
MAR.											
01...	.86	2700	--	5990	8.15	640	80	34	8880	7.8	--
APR.											
27...	.03	1600	3210	3170	4.37	530	18	17	4930	7.8	--
MAY											
01...	.04	1500	2930	2890	3.98	470	2	17	4530	7.7	--
JUNE											
05...	.10	1700	3370	3460	4.58	450	0	23	5280	7.0	30.0
JULY											
07...	.20	2400	4600	4630	6.26	500	0	29	7210	7.7	22.0
AUG.											
07...	.03	2800	4910	5040	6.68	540	1	30	7740	7.8	33.5
SEP.											
02...	.08	1000	2790	2720	3.79	510	190	15	4230	7.6	--

09429300 COLORADO RIVER BELOW CIBOLA VALLEY, ARIZ.

LOCATION.--Lat 33°13'16", long 114°40'18", in NE¼SW¼ sec. 30, T. 2 S., R. 23 W., Yuma County, at gaging station on left bank 6.7 miles south of Cibola, 38 miles upstream from Imperial Dam, and 52 miles downstream from Palo Verde Dam.

DRAINAGE AREA.--183,800 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: January 1969 to September 1972.
Water temperatures: March 1956 to December 1966.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 04...	--	--	9.9	10	91	35	130	5.5	164	0	370	89
NOV. 01...	0730	--	11	0	97	35	140	5.5	172	0	380	130
DEC. 06...	--	--	10	0	99	33	140	5.5	179	0	370	120
JAN. 03...	--	--	9.4	10	94	34	120	6.9	175	0	360	110
FEB. 14...	--	--	11	10	93	33	140	5.7	216	0	350	130
MAR. 06...	0800	--	10	10	100	32	140	5.7	185	0	360	130
APR. 03...	0800	--	9.3	10	95	34	150	6.0	176	0	370	140
MAY 01...	0800	--	9.7	10	97	34	150	5.7	184	0	370	140
30...	0700	--	9.3	10	98	34	150	5.1	183	0	360	130
JULY 10...	0740	11320	11	20	97	32	140	4.9	172	0	340	130
AUG. 01...	0745	12450	10	20	89	32	130	6.3	168	0	340	120
SEP. 05...	0750	--	11	10	91	32	140	5.4	172	0	340	130

09429300 COLORADO RIVER BELOW CIBOLA VALLEY, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 04...	.4	.37	180	800	813	1.09	370	240	2.9	1260	7.9
NOV. 01...	.3	.36	190	850	885	1.16	390	250	3.1	1330	8.2
DEC. 06...	.5	.33	120	862	868	1.17	380	240	3.1	1300	8.1
JAN. 03...	.4	.37	170	838	823	1.14	370	230	2.7	1250	8.1
FEB. 14...	.5	.42	190	856	871	1.16	370	190	3.2	1320	8.1
MAR. 06...	.5	.47	110	876	871	1.19	380	230	3.1	1330	8.1
APR. 03...	.5	.64	200	892	894	1.21	380	230	3.4	1370	8.0
MAY 01...	.5	.51	190	914	900	1.24	380	230	3.3	1410	8.1
30...	.3	.34	210	894	878	1.22	380	230	3.3	1360	8.1
JULY 10...	.5	.38	200	844	837	1.15	360	220	3.2	1300	7.9
AUG. 01...	.5	.27	170	818	812	1.11	350	220	3.0	1270	7.8
SEP. 05...	.4	.18	200	854	835	1.16	360	220	3.2	1310	8.0

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.

(Formerly published as 09429500, Colorado River at Imperial Dam)

LOCATION.--Lat 32°52'59", long 114°27'55", in NW¼SW¼ sec. 9, T. 15 S., R. 24 E., San Bernardino meridian, Imperial County, Calif., above trash racks at All-American Canal headworks at west end of Imperial Dam, 5 miles upstream from Laguna Dam, 15 miles northeast of Yuma, 90 miles downstream from Palo Verde Dam, and 147 miles downstream from Parker Dam.

DRAINAGE AREA.--184,600 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1972.
Prior to October 1971, published as sta 09429500, Colorado River at Imperial Dam, Ariz.-Calif.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	MEAN DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT.												
06...	6460	12	10	95	35	160	5.4	177	0	370	120	.6
NOV.												
03...	4920	13	10	99	37	180	5.8	190	0	400	160	.4
DEC.												
08...	6160	14	0	97	35	170	6.2	185	0	380	160	.7
JAN.												
05...	7400	12	10	99	36	150	7.3	180	0	390	140	.5
FEB.												
02...	6440	13	10	99	34	170	6.1	191	0	380	160	.5
MAR.												
01...	8020	11	10	100	33	150	5.5	188	0	370	130	.5
APR.												
05...	11500	9.2	10	100	33	140	5.9	173	0	360	120	.4
MAY												
03...	9340	9.5	10	95	35	140	5.7	182	0	360	130	.5
JUNE												
14...	9200	9.8	10	95	32	140	4.8	182	0	350	130	.4
JULY												
05...	11400	10	10	94	33	140	5.0	173	0	350	120	.4
12...	11100	11	10	95	33	140	4.9	171	0	350	120	.6
26...	11100	11	0	93	32	130	4.9	170	0	350	120	.4
AUG.												
02...	11500	11	10	91	32	140	5.3	168	0	340	120	.5
09...	10800	9.9	10	91	32	140	4.8	169	0	350	120	.5
16...	10100	10	10	89	32	140	5.0	166	0	340	120	.5
SEP.												
06...	8060	11	10	91	33	150	5.4	172	0	360	130	.5
13...	8890	10	10	89	33	140	5.3	164	0	350	120	.5
20...	8950	11	20	90	32	120	5.5	172	0	330	120	.5

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 1,550 micromhos Dec. 3; minimum daily, 1,260 micromhos July 13, 17, 24.

Period of record:
Specific conductance: Maximum daily, 1,880 micromhos Nov. 21, 1969; minimum daily, 1,250 micromhos Aug. 22, 1971.

REMARKS.--Stream discharges reported with analyses represent total flow reaching Imperial Dam. Daily specific-conductance record furnished by Bureau of Reclamation. Since January 1971, daily specific-conductance measurements have been made using a composite of four water samples taken at 6-hour intervals. Composites of four water samples per day are analyzed for chemical constituents.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.											
06...	.31	.03	210	962	987	1.31	380	240	3.6	1410	8.1
NOV.											
02...	.27	.09	240	976	990	1.33	400	240	3.9	1500	8.1
DEC.											
08...	.33	.03	170	986	956	1.35	390	230	3.8	1470	8.2
JAN.											
05...	.38	.00	210	956	925	1.30	400	250	3.3	1430	8.3
FEB.											
02...	.34	.00	240	950	958	1.29	390	230	3.8	1450	8.2
MAR.											
01...	.45	.03	130	880	895	1.20	390	230	3.3	1350	8.2
APR.											
05...	.47	.00	190	866	856	1.18	390	240	3.1	1310	8.2
MAY											
03...	.42	.00	170	896	867	1.22	380	230	3.1	1360	8.3
JUNE											
14...	.29	.00	150	840	853	1.14	370	220	3.2	1330	7.9
JULY											
05...	.51	.00	200	854	840	1.16	370	230	3.2	1290	8.3
12...	.26	.00	200	834	840	1.13	370	230	3.2	1300	7.8
26...	.74	.03	190	856	816	1.16	360	220	3.0	1250	8.0
AUG.											
02...	.40	.03	160	878	824	1.19	360	220	3.2	1290	7.8
09...	.19	.00	160	844	832	1.15	360	220	3.2	1290	8.0
16...	.15	.03	160	830	819	1.13	350	220	3.2	1280	8.1
SEP.											
06...	.17	.03	190	874	866	1.19	360	220	3.4	1250	7.9
13...	.07	.03	190	846	829	1.15	360	220	3.2	1300	8.0
20...	.24	.00	190	840	795	1.14	360	220	2.8	1290	7.8

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
OCT.								
14...	0910	--	--	--	24.5	--	--	120
15...	1355	7080	1350	8.2	24.0	26.0	8.4	--
NOV.								
17...	0850	--	--	--	14.0	--	--	38
18...	1315	5890	1460	8.0	13.5	14.5	10.2	--
DEC.								
15...	0850	--	--	--	14.0	--	--	44
16...	1255	6210	1330	8.1	9.5	12.0	10.7	--
JAN.								
20...	1124	--	--	--	--	--	--	1
21...	1550	4900	1410	8.1	12.0	23.0	10.2	--
FEB.								
16...	0900	--	--	--	12.0	--	--	16
17...	1410	7650	1340	8.0	13.5	25.0	9.7	--
MAR.								
15...	0900	--	--	--	18.5	--	--	30
16...	1305	10760	1080	7.9	19.0	31.0	8.5	--
APR.								
19...	0850	--	--	--	18.0	--	--	10
20...	1500	1140	1200	8.1	25.0	19.0	8.3	--
MAY								
17...	1400	--	--	--	24.0	--	--	1
18...	1325	9860	1200	8.0	24.0	30.0	8.1	--
JUNE								
21...	1200	--	--	--	27.0	--	--	3
22...	1350	10700	1140	8.1	28.0	35.0	7.7	--
JULY								
19...	1725	--	--	--	28.0	--	--	--
20...	1510	11500	1270	8.2	28.0	36.0	--	--
SEP.								
12...	0955	--	--	--	25.5	--	--	30
13...	1400	9340	1240	8.0	26.5	36.0	--	--

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1320	1500	1540	1430	1430	1340	1330	1340	1320	1310	1270	1370
2	1360	1490	1540	1460	1430	1340	1320	1330	1330	1280	1270	1360
3	1440	1510	1550	1410	1390	1360	1290	1340	1330	1300	1270	1350
4	1420	1480	1520	1400	1370	1360	1280	1360	1370	1260	1280	1340
5	1410	1480	1520	1410	1380	1360	1290	1360	1340	1290	1280	1330
6	1400	1480	1520	1410	1400	1310	1290	1240	1320	1280	1280	1330
7	1430	1450	1480	1380	1360	1320	1330	1350	1320	1300	1280	1320
8	1420	1450	1460	1380	1350	1320	1330	1330	1300	1300	1280	1320
9	1430	1440	1440	1380	1360	1290	1320	1320	1310	1300	1290	1330
10	1420	1410	1420	1380	1360	1320	1300	1320	1350	1300	1280	1320
11	1400	1390	1400	1360	1360	1290	1280	1330	1370	1280	1280	1300
12	1380	1410	1380	1370	1340	1320	1300	1350	1330	1270	1300	1300
13	1360	1450	1360	1360	1360	1280	1300	1360	1320	1260	1290	1280
14	1360	1480	1360	1400	1340	1290	1320	1360	1320	1290	1280	1280
15	1360	1470	1360	1440	1340	1290	1320	1340	1310	1300	1270	1310
16	1390	1440	1360	1480	1310	1290	1320	1330	1330	1300	1270	1320
17	1430	1450	1360	1470	1300	1320	1320	1320	1340	1260	1290	1330
18	1390	1420	1380	1470	1340	1340	1320	1330	1320	1280	1300	1310
19	1380	1420	1380	1480	1360	1320	1320	1340	1290	1280	1290	1300
20	1370	1420	1410	1460	1360	1280	1310	1350	1300	1300	1300	1290
21	1410	1430	1410	1450	1350	1280	1310	1360	1300	1300	1300	1300
22	1430	1420	1400	1450	1340	1290	1320	1340	1280	1300	1280	1340
23	1430	1420	1400	1480	1340	1290	1320	1330	1300	1290	1280	1340
24	1470	1420	1430	1450	1340	1310	1310	1320	1300	1260	1300	1350
25	1440	1420	1490	1420	1340	1320	1300	1330	1290	1270	1300	1310
26	1420	1460	1530	1400	1360	1310	1320	1340	1300	1280	1290	1290
27	1400	1510	1470	1420	1360	1300	1340	1370	1300	1300	1290	1300
28	1400	1540	1430	1420	1340	1300	1340	1370	1290	1300	1280	1310
29	1460	1540	1420	1420	1340	1300	1360	1320	1300	1310	1270	1330
30	1490	1540	1400	1430	---	1290	1380	1320	1320	1300	1300	1350
31	1480	---	1400	1430	---	1320	---	1320	---	1290	1330	---
AVG	1410	1460	1440	1420	1360	1310	1320	1340	1320	1290	1290	1320

YEARLY AVERAGE = 1360

09429490 COLORADO RIVER ABOVE IMPERIAL DAM, ARIZ.-CALIF.--Continued

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED GROSS ALPHA AS U-NAT. (PC/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (PC/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)
OCT. 18...	0820	4.8	.2	14	.5	12	1.7
JULY 10...	1325	6.1	1.1	18	<.4	12	.7

DATE	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED NATURAL URANIUM (U) (UG/L)	TOTAL FILT-RABLE RESIDUE (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)
OCT. 18...	9.3	1.5	.17	5.4	1000	12
JULY 10...	10	.6	.19	5.6	960	6

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)
AUG. 16...	1400	10150	.00	.0	.00	.00	.00	.00
SEP. 13...	1400	9340	.00	.0	.00	.00	.00	.00

DATE	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
AUG. 16...	.00	.00	.00	.00	.00	.00	.00
SEP. 13...	.00	.00	.00	.00	.00	.00	.00

09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'22", long 114°32'48", in SE¼NE¼ sec. 19, T. 8 S., R. 22 W., Yuma County, on left bank, 0.6 mile upstream from Gila River, 5 miles east of Yuma, 9 miles downstream from Laguna Dam, 12 miles upstream from northerly international boundary, and 14 miles downstream from Imperial Dam.

DRAINAGE AREA.--185,000 sq mi, approximately.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
04...	--	11	--	110	37	--	195	--	212	--	430	162
12...	--	13	--	109	42	--	198	--	224		415	185
18...	--	12	--	113	41	--	202	--	222	--	415	195
26...	--	14	--	111	42	--	202	--	224	--	420	190
NOV.												
01...	--	12	--	110	40	--	194	--	218	--	415	178
08...	--	12	--	113	43	--	200	--	224	--	420	195
15...	--	12	--	110	40	--	196	--	220	--	415	180
22...	--	12	--	111	42	--	199	--	224	--	415	190
29...	--	12	--	109	43	--	200	--	228	--	420	185
DEC.												
06...	--	14	--	110	45	--	223	--	232	--	430	216
13...	--	12	--	114	40	--	197	--	224	--	410	190
20...	--	11	--	110	41	--	190	--	220	--	400	185
27...	--	12	--	114	40	--	208	--	230	--	415	200
JAN.												
03...	--	12	--	114	40	--	190	--	232	--	400	182
10...	--	12	--	114	40	--	185	--	222	--	400	180
17...	--	11	--	113	40	--	176	--	220	--	395	168
24...	--	11	--	111	41	--	195	--	220	--	410	185
31...	--	11	--	114	41	--	204	--	220	--	420	200
FEB.												
07...	--	12	--	111	40	--	198	--	222	--	410	185
14...	--	12	--	113	38	--	192	--	220	--	400	185
22...	--	11	--	109	40	--	176	--	214	--	400	160
28...	--	11	--	114	40	--	191	--	226	--	410	180
MAR.												
06...	--	10	--	108	39	--	177	--	208	--	395	165
13...	--	11	--	110	37	--	169	--	186	--	395	162
20...	--	11	--	106	39	--	164	--	208	--	385	150
27...	--	11	--	108	40	--	202	--	206	--	405	202
APR.												
03...	--	10	--	107	38	--	178	--	210	--	395	162
10...	--	11	--	109	38	--	177	--	208	--	395	165
17...	--	8.0	--	108	39	--	170	--	212	--	390	156
24...	--	11	--	109	38	--	187	--	212	--	400	175
MAY												
01...	--	9.0	--	103	37	--	162	--	198	--	380	145
08...	--	11	--	108	40	--	177	--	214	--	395	165
15...	--	12	--	112	39	--	186	--	222	--	400	175
22...	--	11	--	109	41	--	186	--	226	--	400	172
30...	--	9.0	--	108	38	--	175	--	208	--	395	158
JUNE												
05...	--	10	--	99	38	--	164	--	196	--	380	146
12...	--	11	--	110	39	--	186	--	216	--	400	175
19...	--	11	--	107	38	--	178	--	210	--	395	162
26...	--	11	--	106	38	--	169	--	208	--	385	154
JULY												
03...	1050	13	70	110	36	170	--	5.7	211	0	380	160
10...	--	11	--	103	38	--	168	--	204	--	385	151
17...	--	11	--	102	39	--	170	--	204	--	385	153
24...	--	11	--	105	38	--	175	--	208	--	390	160
AUG.												
02...	1455	15	10	100	36	170	--	5.2	195	0	400	170
07...	--	12	--	102	38	--	164	--	200	--	375	150
14...	--	12	--	105	37	--	176	--	204	--	385	163
21...	--	11	--	102	38	--	176	--	200	--	390	158
28...	--	11	--	102	38	--	175	--	204	--	390	155
SEP.												
05...	1100	14	60	100	37	180	--	5.3	199	0	350	160
11...	--	12	--	107	38	--	191	--	210	--	405	176
18...	--	11	--	103	37	--	175	--	196	--	395	155
25...	--	12	--	105	38	--	182	--	204	--	395	168

09429690 COLORADO RIVER ABOVE GILA RIVER, NEAR YUMA, ARIZ.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1961-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.												
04...	--	--	--	1130	1050	1.54	425	251	4.1	1640	8.0	--
12...	--	--	--	1130	1070	1.54	445	262	4.1	1700	8.1	--
18...	--	--	--	1180	1090	1.60	450	268	4.1	1730	7.9	--
26...	--	--	--	1160	1090	1.58	450	266	4.1	1740	8.0	--
NOV.												
01...	--	--	--	1110	1060	1.51	440	261	4.0	1670	8.0	--
08...	--	--	--	1160	1100	1.58	460	276	4.1	1760	8.0	--
15...	--	--	--	1090	1060	1.48	440	260	4.1	1670	8.1	--
22...	--	--	--	1090	1080	1.48	450	266	4.1	1710	8.0	--
29...	--	--	--	1130	1080	1.54	450	263	4.1	1720	8.0	--
DEC.												
06...	--	--	--	1190	1160	1.62	460	270	4.5	1830	8.1	--
13...	--	--	--	1120	1080	1.52	450	272	4.0	1710	8.0	--
20...	--	--	--	1140	1050	1.55	445	264	3.9	1680	8.0	--
27...	--	--	--	1170	1100	1.59	450	262	4.3	1750	8.1	--
JAN.												
03...	--	--	--	1140	1050	1.55	450	260	3.9	1670	8.0	--
10...	--	--	--	1120	1040	1.52	450	268	3.8	1670	8.0	--
17...	--	--	--	1080	1010	1.47	445	264	3.6	1620	8.0	--
24...	--	--	--	1070	1060	1.46	445	264	4.0	1680	8.1	--
31...	--	--	--	1140	1100	1.55	455	274	4.2	1730	8.0	--
FEB.												
07...	--	--	--	1110	1070	1.51	440	258	4.1	1680	8.1	--
14...	--	--	--	1090	1050	1.48	440	260	4.0	1670	8.1	--
22...	--	--	--	1020	1000	1.39	435	260	3.7	1570	8.0	--
28...	--	--	--	1100	1060	1.50	450	264	3.9	1670	8.0	--
MAR.												
06...	--	--	--	1040	998	1.41	430	260	3.7	1590	8.0	--
13...	--	--	--	1010	977	1.37	425	272	3.6	1560	8.0	--
20...	--	--	--	1000	959	1.36	425	254	3.5	1510	8.0	--
27...	--	--	--	1110	1070	1.51	435	266	4.2	1680	8.1	--
APR.												
03...	--	--	--	1020	995	1.39	425	253	3.8	1570	8.1	--
10...	--	--	--	1020	999	1.39	430	260	3.7	1560	8.1	--
17...	--	--	--	1010	977	1.37	430	256	3.6	1540	8.1	--
24...	--	--	--	1030	1030	1.40	430	256	3.9	1590	8.1	--
MAY												
01...	--	--	--	956	935	1.30	410	248	3.5	1470	8.1	--
08...	--	--	--	1040	1000	1.41	435	260	3.7	1550	8.1	--
15...	--	--	--	1100	1040	1.50	440	258	3.9	1630	8.1	--
22...	--	--	--	1070	1030	1.46	440	254	3.9	1620	8.0	--
30...	--	--	--	1020	987	1.39	425	254	3.7	1550	8.0	--
JUNE												
05...	--	--	--	970	935	1.32	405	244	3.6	1450	8.1	--
12...	--	--	--	1070	1030	1.46	435	258	3.9	1620	8.0	--
19...	--	--	--	1010	973	1.37	425	253	3.8	1540	7.9	--
26...	--	--	--	984	967	1.34	420	250	3.6	1500	8.0	--
JULY												
03...	.6	.23	220	972	980	1.32	420	250	3.6	1500	8.1	25.5
10...	--	--	--	990	958	1.35	415	248	3.6	1510	7.9	--
17...	--	--	--	982	962	1.34	415	248	3.6	1490	7.9	--
24...	--	--	--	994	983	1.35	420	250	3.7	1520	8.1	--
AUG.												
02...	.6	.14	250	964	994	1.31	400	240	3.7	1520	8.1	30.5
07...	--	--	--	988	941	1.34	410	246	3.5	1470	8.1	--
14...	--	--	--	1010	980	1.37	415	248	3.8	1520	8.0	--
21...	--	--	--	992	975	1.35	410	246	3.8	1500	7.9	--
28...	--	--	--	988	973	1.34	410	242	3.8	1510	8.0	--
SEP.												
05...	.8	.10	240	1000	946	1.36	400	240	3.9	1530	8.0	29.5
11...	--	--	--	1060	1030	1.44	425	253	4.0	1600	8.1	--
18...	--	--	--	984	974	1.34	410	250	3.8	1500	8.1	--
25...	--	--	--	1010	1000	1.37	420	252	3.9	1560	8.1	--

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.

LOCATION.--Lat 32°52'06", long 109°30'38", in SE¼NE¼ sec. 31, T. 6 S., R. 28 E., Graham County, at gaging station 0.6 mile downstream from intake of Brown Canal, 8 miles northeast of Solomon, and 17 miles downstream from San Francisco River.

DRAINAGE AREA.--7,896 sq mi.

PERIOD OF RECORD.--Specific conductance: January 1965 to September 1972.
Water temperatures: January 1965 to September 1972.
Sediment records: February 1965 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 2,200 micromhos July 12; minimum daily, 305 micromhos Dec. 28.
Water temperatures: Maximum, 34.0°C July 6, 12; minimum, 5.0°C Jan. 5.
Sediment concentrations: Maximum daily, 43,500 mg/l July 22; minimum daily, 9 mg/l May 25.
Sediment discharge: Maximum daily, 307,000 tons Oct. 26; minimum daily, 1.1 ton May 25.

Period of record:
Specific conductance (1967-72): Maximum daily, 2,200 micromhos July 12, 1972; minimum daily, 260 micromhos Feb. 15, 28, 29, Apr. 4, 1968.
Water temperatures (1967-72): Maximum, 34.5°C July 17, 1970; minimum, 2.0°C Dec. 20, 21, 1967, Jan. 7, 1971.
Sediment concentrations: Maximum daily, 52,000 mg/l July 28, 1967; minimum daily, 4 mg/l May 22, 29, 1971.
Sediment discharge: Maximum daily, 1,900,000 tons Dec. 23, 1965; minimum daily, 0.50 ton May 29, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	410	540	960	370	800	1100	1250	1400	1600	1900	1050	510
2	460	560	880	410	820	1100	1200	1400	1400	1900	1020	---
3	470	610	880	460	820	1100	1200	1500	1550	1900	1100	380
4	650	750	880	460	900	1100	1200	1410	1550	1900	1100	370
5	800	790	900	490	870	1100	1250	1410	1550	1700	1100	390
6	800	850	900	550	870	1100	1250	1410	1550	1800	1100	400
7	---	850	900	550	930	1100	1250	1400	1550	2000	1100	450
8	700	890	900	570	930	1100	1250	1450	1300	1800	1200	490
9	590	900	900	570	930	1100	1300	1450	1300	1800	850	510
10	700	900	850	580	930	1200	1300	1410	1100	1800	600	450
11	700	990	890	590	930	1200	1400	1410	1250	1800	610	680
12	810	990	900	610	930	1200	1400	1410	1250	2200	850	380
13	750	990	900	620	970	1200	1400	1410	1300	1800	750	350
14	950	950	900	690	970	1200	1350	1600	1300	1900	1100	330
15	1190	950	900	700	970	1200	1350	1450	1250	1500	790	340
16	690	1000	900	710	970	1200	1400	1200	1350	1600	1190	350
17	730	960	900	710	970	1200	1300	1500	1300	620	1100	400
18	390	960	900	710	970	1200	1300	1500	1720	590	750	450
19	460	960	910	710	970	1100	1300	1450	1390	650	750	510
20	590	950	910	750	1000	1200	1300	1450	1500	710	450	580
21	590	990	910	750	1000	1250	1300	1600	1500	910	460	610
22	600	960	910	750	1010	1250	1300	1600	1600	700	690	680
23	650	960	910	790	1020	1250	1400	1600	1600	550	800	700
24	690	960	910	780	1000	1250	1400	1500	1600	710	800	760
25	400	960	910	780	1000	1250	1400	1500	1600	700	890	800
26	345	960	---	780	1000	1350	1400	1550	1600	800	805	900
27	340	960	575	780	1000	1350	1400	1410	1600	600	400	990
28	340	960	305	800	1000	,300	1400	1600	1800	710	440	990
29	390	960	320	800	1100	1300	1400	1600	1800	800	410	990
30	440	960	340	800	---	1250	1400	1450	1800	1000	430	990
31	450	---	340	800	---	1250	---	1600	---	1100	540	---
AVG	603	899	813	659	951	1200	1330	1470	1490	1300	814	577

YEARLY AVERAGE = 1010

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19.0	13.0	12.0	7.0	9.0	15.0	13.0	22.0	27.0	27.0	31.0	22.0
2	17.0	14.0	11.0	9.0	8.0	15.0	12.5	23.0	27.0	27.0	24.0	---
3	20.0	13.5	11.0	7.0	8.0	16.0	16.0	25.0	28.0	27.0	30.0	22.0
4	20.0	14.0	10.0	6.0	9.0	18.0	23.0	19.0	24.0	29.0	23.0	23.0
5	20.0	15.0	9.5	5.0	12.0	20.0	24.5	21.0	24.5	21.0	30.0	26.0
6	18.0	15.0	10.0	6.5	12.0	19.5	20.5	25.0	25.0	34.0	28.5	23.0
7	---	16.0	9.0	7.0	12.0	20.0	23.0	23.0	22.5	23.0	27.0	24.0
8	17.0	16.0	9.0	7.5	12.0	20.0	23.0	23.5	20.0	30.0	23.0	25.0
9	20.0	16.0	9.0	7.5	10.5	20.5	19.0	26.0	21.0	28.0	24.0	23.0
10	19.0	16.0	9.0	8.0	10.5	20.5	23.0	25.0	23.0	33.0	27.5	22.0
11	18.0	16.0	9.0	8.0	10.0	20.0	23.0	24.0	31.0	30.5	24.0	22.0
12	20.0	16.0	8.5	8.0	11.0	20.0	21.0	24.0	22.0	34.0	25.0	22.0
13	19.5	16.5	7.0	9.5	12.0	20.0	19.0	24.5	29.0	33.0	29.0	22.0
14	21.5	16.0	7.0	9.5	12.0	20.0	16.0	25.0	22.0	32.0	26.0	21.5
15	21.0	15.0	7.0	6.5	12.0	20.0	20.5	25.0	22.0	30.0	28.0	24.0
16	19.5	12.0	7.0	9.0	12.5	20.0	22.5	25.5	23.0	24.0	25.0	21.0
17	14.0	13.0	7.0	9.5	13.0	20.0	20.5	26.0	29.0	21.5	27.0	24.0
18	12.0	12.0	6.0	10.0	15.0	21.5	20.0	26.0	29.0	25.0	23.0	25.0
19	11.0	12.5	7.0	9.5	15.0	19.0	20.0	26.5	22.0	28.0	22.5	26.0
20	13.0	13.0	7.0	10.0	15.0	20.5	18.0	27.0	29.0	28.0	27.0	25.5
21	17.0	13.0	8.5	10.0	15.0	20.0	22.0	23.5	22.0	28.0	25.0	24.0
22	17.0	13.0	9.0	11.0	15.0	20.0	23.5	24.5	27.0	23.0	29.0	23.0
23	17.0	13.0	12.0	10.5	16.0	20.0	25.0	25.0	21.0	26.5	24.5	18.0
24	15.0	13.0	11.5	9.5	16.0	20.5	25.5	25.0	21.5	26.0	23.0	23.0
25	14.0	10.0	10.0	9.0	16.5	20.0	22.5	25.0	27.5	28.0	23.0	23.0
26	14.0	11.0	---	9.5	17.0	17.0	22.0	25.5	27.0	27.0	22.0	23.0
27	10.0	9.0	10.0	11.0	17.0	15.0	23.0	23.5	26.5	28.5	20.5	24.0
28	11.5	11.5	7.0	11.0	18.0	15.5	23.0	27.0	18.0	32.0	24.0	24.0
29	13.0	10.0	8.0	11.0	16.0	18.0	25.0	20.0	28.5	31.0	22.0	24.0
30	11.0	13.0	9.0	10.0	---	15.5	23.0	24.0	22.0	31.0	23.0	24.0
31	10.0	---	6.0	10.5	---	18.0	---	27.0	---	32.0	24.0	---
AVG	16.5	13.5	9.0	9.0	13.0	19.0	21.0	24.5	24.5	28.5	25.5	23.0

YEARLY AVERAGE = 19.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1730	20400	129000	768	1700	3530	229	73	45
2	1380	20500	85400	630	1300	2210	237	361	231
3	389	6500	6830	502	900	1220	269	470	341
4	218	1700	1000	441	628	748	257	380	264
5	163	1300	572	380	531	545	253	188	128
6	132	1000	356	350	442	418	245	121	80
7	98	700	185	310	372	311	237	145	93
8	262	15200	15800	290	270	211	241	163	106
9	347	22900	24700	264	172	123	237	105	67
10	224	6600	3990	237	149	95	237	90	58
11	157	4200	1780	229	130	80	229	100	62
12	157	2200	933	209	118	67	217	79	46
13	143	5500	2120	205	98	54	214	67	39
14	105	3450	978	194	117	61	243	141	93
15	77	700	146	191	105	54	244	96	63
16	69	3600	671	205	100	55	218	76	45
17	129	6620	2550	225	106	64	202	62	34
18	511	14400	21700	221	85	51	191	35	18
19	519	4800	6730	237	86	55	191	138	71
20	458	2500	3090	213	108	62	198	55	29
21	380	1500	1540	213	71	41	194	59	31
22	340	1100	1010	202	62	34	184	80	40
23	303	817	668	198	63	34	188	55	28
24	285	700	539	198	47	25	184	100	50
25	4980	20700	356000	194	54	28	188	122	62
26	7440	19800	397000	191	40	21	205	120	66
27	5280	11900	170000	188	28	14	1150	3840	26900
28	3440	8500	78900	194	54	28	2250	9900	62700
29	1930	5400	28100	198	51	27	1730	4280	20000
30	1350	3100	11300	205	56	31	1660	2610	11700
31	970	2100	5500	--	--	--	1400	2420	9150
TOTAL	33966	--	1359000	8282	--	10297	13918	--	132640

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	1170	2600	8210	254	92	63	160	82	35
2	1030	2000	5560	232	111	70	154	54	22
3	894	1420	3430	213	106	61	154	56	23
4	782	1220	2580	204	86	47	154	44	18
5	692	952	1780	197	127	68	148	34	14
6	628	741	1260	199	110	59	145	38	15
7	545	625	920	196	107	57	148	53	21
8	539	587	854	207	176	98	142	55	21
9	511	575	793	200	106	57	134	37	13
10	504	444	604	200	98	53	131	82	29
11	467	512	646	197	69	37	126	46	16
12	449	400	485	194	92	48	123	68	23
13	421	409	465	190	66	34	123	61	20
14	395	382	407	189	75	38	123	84	28
15	369	329	328	189	69	35	123	32	11
16	369	309	308	188	83	42	123	71	24
17	344	235	218	191	81	42	119	53	17
18	330	185	165	183	70	35	114	39	12
19	319	193	166	180	54	26	102	97	27
20	316	202	172	164	56	25	92	39	9.7
21	303	180	147	159	75	32	97	37	9.7
22	298	173	139	157	99	42	99	55	15
23	292	200	158	144	62	24	99	39	10
24	297	142	114	150	54	22	92	63	16
25	293	118	93	168	78	35	84	48	11
26	284	103	79	164	60	27	84	15	3.4
27	276	105	78	164	86	38	84	36	8.2
28	265	146	104	161	93	40	86	34	7.9
29	264	129	92	154	80	33	90	39	9.5
30	258	111	77	--	--	--	90	40	9.7
31	255	132	91	--	--	--	102	23	6.3
TOTAL	14159	--	30523	5388	--	1288	3645	--	505.4

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	104	31	8.7	66	15	2.7	66	25	4.5
2	104	28	7.9	64	24	4.1	61	18	3.0
3	108	23	6.6	62	15	2.5	56	32	4.8
4	104	35	9.8	62	12	2.0	55	18	2.7
5	99	25	6.7	64	22	3.8	58	30	4.7
6	92	23	5.7	64	54	9.3	66	22	3.9
7	88	65	15	62	26	4.4	80	61	13
8	90	19	4.6	62	24	4.0	90	45	11
9	88	18	4.3	62	17	2.8	110	325	97
10	86	21	4.9	61	21	3.5	114	880	271
11	80	20	4.3	60	31	5.0	97	350	92
12	80	19	4.1	61	28	4.6	96	350	91
13	74	27	5.4	60	15	2.4	94	640	162
14	70	33	6.2	55	21	3.1	92	755	188
15	70	100	19	54	19	2.8	88	680	162
16	70	47	8.9	55	26	3.9	86	430	100
17	74	36	7.2	51	22	3.0	75	595	120
18	68	31	5.7	51	26	3.6	69	420	78
19	70	61	12	50	26	3.5	61	350	58
20	72	24	4.7	50	24	3.2	55	235	35
21	74	23	4.6	48	24	3.1	48	180	23
22	70	30	5.7	50	15	2.0	47	178	23
23	70	31	5.9	50	15	2.0	47	145	18
24	70	37	7.0	48	16	2.1	47	141	18
25	68	44	8.1	47	9	1.1	47	109	14
26	67	20	3.6	48	11	1.4	46	75	9.3
27	67	14	2.5	48	11	1.4	45	74	9.0
28	67	23	4.2	50	22	3.0	43	85	9.9
29	66	17	3.0	52	10	1.4	43	61	7.1
30	66	14	2.5	55	11	1.6	42	51	5.8
31	--	--	--	58	14	2.2	--	--	--
TOTAL	2374	--	198.8	1730	--	95.5	2024	--	1638.7

09448500 GILA RIVER AT HEAD OF SAFFORD VALLEY, NEAR SOLOMON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	41	59	6.5	111	1090	327	566	5200	7950
2	40	40	4.3	116	1340	420	828	14400	33500
3	39	29	3.1	97	1120	293	3310	25900	247000
4	36	32	3.1	94	600	152	2150	32900	191000
5	39	34	3.6	90	450	109	1880	17200	89800
6	40	27	2.9	97	1740	456	1030	9300	25900
7	41	18	2.0	255	16500	18200	818	8500	18800
8	43	15	1.7	150	31000	12600	808	13800	30800
9	43	23	2.7	120	21200	6870	687	6730	12900
10	41	12	1.3	362	23500	23300	468	6550	8510
11	41	13	1.4	195	10700	5630	563	3830	5730
12	48	47	6.1	131	5100	1800	1730	29600	138000
13	50	44	5.9	133	5800	2080	1870	19800	100000
14	55	78	12	106	1200	343	1710	21600	103000
15	56	67	10	132	8300	2960	1760	18400	90000
16	70	72	14	112	3100	937	1210	17100	55900
17	998	25400	77200	103	1700	473	949	8000	20500
18	350	16800	15800	203	10000	5480	748	3500	7070
19	208	12900	7240	299	27000	21800	588	2200	3490
20	157	11200	4750	439	25000	29600	450	1300	1580
21	74	6800	1360	271	12700	9290	395	1000	1070
22	551	43500	140000	127	8300	2850	336	750	680
23	289	26000	20300	107	3800	1100	313	600	507
24	237	11400	9130	110	2400	713	282	450	343
25	213	11500	6610	94	4300	1090	236	380	242
26	275	14600	10800	498	8760	28500	199	290	156
27	331	15400	13800	1850	29500	162000	179	193	93
28	234	9500	6000	921	24600	61400	179	245	118
29	182	6300	3100	1010	16000	43600	178	197	95
30	139	2200	826	885	6700	16000	170	163	75
31	120	950	308	622	3600	6050	--	--	--
TOTAL	5081	--	317304.6	9840	--	466423	26590	--	1194809
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									126997
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									3514811.0

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
JULY 27...	1900	28.5	255	12800	8810	52	65	94	99	--	100	--
AUG. 20...	1830	27.0	374	24600	24800	41	52	83	--	98	--	100

09460200 FRYE CREEK AT THATCHER, ARIZ.

LOCATION.--Lat 32°50'00", long 109°45'39", in SW¼ sec. 11, T. 7 S., R. 25 E., Graham County, at gaging station 1,300 ft downstream from Frye Creek detention dam, and 1 mile south of Thatcher.

DRAINAGE AREA.--24.3 sq mi.

PERIOD OF RECORD.--Sediment records: March 1963 to September 1972.

REMARKS.--This station is operated in conjunction with a trap efficiency study of the Frye Creek detention reservoir. Results are published by flow event, as opposed to the normal procedure of reporting daily values.

SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
(WHERE NO MEAN CONCENTRATIONS ARE SHOWN, LOADS ARE COMPUTED FROM DISCHARGE-SEDIMENT LOAD CURVES)

DATE	FLOW EVENT NO.	OUTFLOW DURATION[1] (HOURS)	TOTAL OUTFLOW[2] (ACRE-FEET)	MEAN DISCHARGE FOR PERIOD (CFS)	MEAN CONCENTRATION (MG/L)	OUTFLOW SEDIMENT LOAD (TONS)
OCT. 8, 1971	86	5	0.9	0.46	--	16
OCT. 17	87	2	.3	.16	--	1.6
OCT. 18-19	88	3.5	1.0	.50	--	6.5
OCT. 24-25	89	12	21	10	7,530	390
DEC. 27	90	44	5.6	2.8	--	133
JULY 16-17, 1972 ...	91	7	.9	.45	--	4.9
JULY 24-25	92	11.5	18	8.8	--	202
AUG. 18	93	11	1.3	.67	--	61
AUG. 26-28	94	62.5	440	222	4,130	4,070

[1] Duration of event is based on time when flow is more than 0.2 cfs.
[2] Excluding outflow less than 0.2 cfs.

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
(ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
OCT. 24...	1820	15.0	11	18300	544	29	39	64	91	100
AUG. 26...	0920	21.0	15	12400	502	47	62	83	94	100

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.

LOCATION.--Lat 31°37'33", long 110°10'26", in NE¼NE¼ sec. 11, T. 21 S., R. 21 E., Cochise County, at gaging station in Spanish land grant of San Juan de las Boquillas y Nogales, at county highway bridge, 0.3 mile south of Charleston, 1.5 miles upstream from Charleston damsite, and 9 miles upstream from Babocomari River.

DRAINAGE AREA.--1,219 sq mi, of which 696 sq mi is in Mexico.

PERIOD OF RECORD.--Specific conductance: October 1964 to September 1972.
Water temperatures: July 1963 to September 1972.
Sediment records: July 1963 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 550 micromhos Oct. 31; minimum daily, 240 micromhos Aug. 26.
Water temperatures: Maximum, 31.0°C Aug. 22; minimum, 1.0°C Jan. 12, 14.
Sediment concentrations: Maximum daily, 25,000 mg/l July 16; minimum daily, 2.0 mg/l May 23.
Sediment discharge: Maximum daily, 99,400 tons Aug. 26; minimum daily, 0.03 ton July 3.

Period of record:
Specific conductance: Maximum daily, 1,550 micromhos Dec. 22, 1967; minimum daily, 140 micromhos Mar. 18, 1969.
Water temperatures: Maximum, 36.0°C July 12, 1968; minimum, freezing point on several days during 1964-68, 1970, 1971.
Sediment concentrations: Maximum daily, 30,600 mg/l July 29, 1966; minimum daily, 1.0 mg/l May 27, 28, 31, June 1, 2, 1966, Oct. 23, 24, Nov. 2, 12, 1969.
Sediment discharge: Maximum daily, 410,000 tons Aug. 14, 1964; minimum daily, 0.01 ton July 3, 6, 7, 1969, July 10, 1971.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	370	400	410	440	350	370	400	360	350	340	360	280
2	350	370	460	---	350	410	430	360	450	340	360	300
3	350	380	460	440	350	400	390	360	400	340	400	280
4	350	---	460	440	350	370	390	360	360	350	390	350
5	400	380	460	430	350	370	370	360	350	350	390	360
6	500	400	460	500	350	370	370	360	350	---	330	350
7	520	380	460	460	350	370	370	350	420	390	230	350
8	460	400	420	460	350	370	370	350	360	350	310	360
9	370	400	420	430	350	370	370	350	380	340	350	350
10	370	390	440	500	350	370	370	350	350	340	420	350
11	360	390	430	440	350	430	370	350	360	---	240	360
12	400	380	460	410	350	390	370	---	400	380	220	370
13	360	390	410	400	350	360	450	370	360	350	310	360
14	360	440	410	410	350	390	370	---	360	300	310	280
15	360	450	440	410	400	370	370	370	360	320	340	270
16	360	450	440	410	360	370	370	360	360	280	340	250
17	380	430	450	410	440	430	420	370	350	220	390	400
18	360	400	410	410	410	390	470	360	350	300	360	400
19	360	400	410	430	360	360	390	360	350	300	350	450
20	370	400	410	430	360	390	390	370	350	380	350	430
21	360	400	---	410	360	370	370	360	350	400	---	400
22	360	400	430	440	380	370	360	360	380	400	---	400
23	360	410	440	430	370	390	390	340	450	280	390	410
24	360	370	450	430	370	390	370	360	350	290	410	310
25	280	---	440	450	370	370	370	350	360	300	---	380
26	440	410	440	460	370	370	360	380	390	300	240	350
27	490	390	440	460	350	370	360	350	340	390	260	440
28	410	390	440	340	350	360	440	340	320	360	300	350
29	400	400	460	340	370	370	360	350	340	380	350	350
30	380	450	420	340	---	---	360	350	340	350	400	350
31	550	---	430	350	---	440	---	350	---	360	390	---
AVG	390	402	437	424	363	382	385	357	366	337	339	355

YEARLY AVERAGE = 378

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	13.0	7.5	6.5	6.0	8.0	7.5	10.0	16.5	21.5	21.0	25.0
2	13.0	14.0	6.5	---	3.0	17.0	9.0	12.5	15.0	17.0	25.5	20.0
3	15.0	8.5	5.0	4.0	3.5	19.0	8.0	9.5	20.5	21.5	25.0	23.5
4	13.5	---	7.0	8.5	9.0	7.0	12.0	14.5	19.5	17.0	29.5	20.0
5	17.0	9.0	6.0	10.5	5.5	8.0	9.0	10.0	19.5	23.0	21.5	21.5
6	14.0	11.0	4.5	12.0	7.0	8.0	13.0	15.0	9.0	---	24.0	21.0
7	17.0	7.5	5.0	10.5	2.5	11.5	9.0	12.0	22.5	28.5	19.0	21.0
8	13.0	19.0	7.0	6.5	3.0	8.5	10.0	12.5	26.0	20.0	23.5	19.0
9	14.5	18.0	6.0	3.5	4.5	11.0	9.0	22.0	23.5	23.5	18.0	21.0
10	15.0	8.0	6.0	2.5	6.5	9.0	11.0	20.0	17.0	26.0	20.5	18.0
11	17.0	10.0	3.0	3.5	3.0	21.0	12.5	19.5	21.5	---	24.0	21.0
12	13.0	9.5	2.0	1.0	3.0	9.0	15.0	---	18.5	21.0	16.5	18.0
13	17.0	9.0	2.0	4.0	2.0	10.0	21.0	19.0	26.5	24.0	15.0	21.0
14	23.0	9.0	5.0	1.0	5.5	9.5	15.0	---	18.0	20.5	21.0	24.0
15	21.5	9.5	2.0	3.5	16.0	11.5	5.0	20.0	23.0	25.5	26.0	27.0
16	14.0	8.5	2.0	3.0	5.5	17.5	9.0	---	18.0	20.0	---	18.0
17	13.0	6.0	6.0	4.0	14.0	20.0	9.0	25.0	22.0	22.0	29.0	18.0
18	8.5	5.0	6.0	3.5	16.5	8.0	11.0	20.5	17.0	20.0	29.5	17.0
19	12.0	6.0	5.0	4.0	6.0	11.5	9.0	18.0	23.0	24.0	20.0	21.0
20	10.0	6.0	5.0	2.5	6.0	10.0	11.0	23.5	18.0	29.0	23.0	15.0
21	11.5	6.0	---	12.0	6.5	10.5	7.0	11.0	22.5	25.0	---	17.0
22	10.0	6.0	8.5	2.5	13.5	10.5	10.5	16.0	28.0	22.0	---	15.0
23	12.0	7.5	16.0	3.0	6.0	14.0	8.0	11.0	29.0	25.5	31.0	18.0
24	13.0	6.5	16.0	2.0	6.0	9.5	14.0	21.0	16.0	21.5	29.5	14.5
25	15.0	---	8.0	3.0	5.0	11.0	8.5	23.5	19.0	24.5	---	24.0
26	16.0	6.0	8.0	4.5	6.0	9.5	12.0	25.0	23.0	25.5	20.0	21.5
27	17.0	4.0	8.0	13.0	6.0	12.0	19.5	13.0	21.0	25.0	18.0	25.0
28	16.5	6.0	8.5	4.0	6.5	13.0	27.5	16.5	15.0	22.0	24.5	14.0
29	10.5	5.5	7.0	4.0	6.0	6.5	9.0	17.0	21.0	23.5	22.0	13.0
30	4.5	16.5	4.0	3.5	---	---	12.0	19.0	18.0	21.5	22.0	12.5
31	18.0	---	5.5	6.0	---	19.5	---	15.0	---	25.0	28.0	---
AVG	14.5	9.0	6.5	5.0	6.5	11.5	11.5	17.0	20.0	23.0	23.0	19.5

YEARLY AVERAGE = 14.0

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	32	284	25	22	110	6.5	20	48	2.6
2	26	188	13	21	100	5.7	20	50	2.7
3	23	252	16	21	92	5.2	20	92	5.0
4	19	94	4.8	20	50	2.7	23	31	1.9
5	23	300	19	19	36	1.8	26	53	3.7
6	40	1570	170	19	34	1.7	24	84	5.4
7	36	1020	99	20	23	1.2	22	18	1.1
8	53	3600	515	18	48	2.3	21	21	1.2
9	25	580	39	18	21	1.0	21	38	2.2
10	18	160	7.8	17	32	1.5	21	12	.68
11	17	128	5.9	16	17	.73	22	38	2.3
12	17	114	5.2	17	21	.96	22	13	.77
13	16	95	4.1	18	15	.73	23	16	.99
14	14	24	.91	17	13	.60	23	32	2.0
15	13	21	.74	17	21	.96	23	11	.68
16	14	25	.95	17	19	.87	23	37	2.3
17	22	50	3.0	19	22	1.1	23	12	.75
18	24	140	9.1	19	21	1.1	25	60	4.1
19	24	117	7.6	18	38	1.8	26	20	1.4
20	22	73	4.3	18	34	1.7	26	27	1.9
21	21	34	1.9	18	26	1.3	26	45	3.2
22	21	23	1.3	19	18	.92	26	60	4.2
23	22	23	1.4	19	18	.92	26	32	2.2
24	45	552	531	18	19	.92	25	42	2.8
25	204	7780	4220	18	20	.97	23	12	.75
26	93	4400	1100	19	24	1.2	23	24	1.5
27	34	1750	161	21	18	1.0	21	26	1.5
28	29	445	35	19	22	1.1	19	25	1.3
29	25	290	20	20	80	4.3	19	19	.97
30	24	115	7.5	20	26	1.4	19	48	2.5
31	24	105	6.8	--	--	--	19	36	1.8
TOTAL	1020	--	7036.30	562	--	54.18	700	--	66.39

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	20	67	3.6	15	57	2.3	14	19	.72
2	22	70	4.2	15	59	2.4	14	21	.79
3	22	75	4.5	14	25	.95	14	30	1.1
4	21	88	5.0	15	31	1.3	14	34	1.3
5	21	96	5.4	15	24	.97	14	16	.60
6	20	96	5.2	15	25	1.0	14	20	.76
7	19	41	2.1	15	46	1.9	13	19	.67
8	20	42	2.3	16	53	2.3	14	17	.64
9	20	69	3.7	15	35	1.4	14	26	.98
10	20	28	1.5	15	27	1.1	14	20	.76
11	20	51	2.8	15	36	1.5	13	14	.49
12	19	40	2.1	15	29	1.2	13	15	.53
13	19	53	2.7	15	38	1.5	12	16	.52
14	20	35	1.9	15	28	1.1	12	17	.55
15	20	51	2.8	15	19	.77	12	17	.55
16	19	52	2.7	15	16	.65	12	15	.49
17	20	41	2.2	14	11	.42	13	7	.25
18	20	37	2.0	14	26	.98	12	25	.81
19	19	31	1.6	15	21	.85	12	11	.36
20	19	23	1.2	16	29	1.3	12	25	.81
21	19	32	1.6	16	27	1.2	13	7	.25
22	18	59	2.9	17	24	1.1	12	8	.26
23	17	29	1.3	17	27	1.2	12	12	.39
24	17	27	1.2	16	26	1.1	12	10	.32
25	17	26	1.2	16	22	.95	12	12	.39
26	16	21	.91	15	8	.32	12	11	.36
27	16	22	.95	15	32	1.3	12	11	.36
28	14	44	1.7	15	23	.93	11	8	.24
29	14	49	1.9	14	22	.83	11	11	.33
30	15	67	2.7	--	--	--	11	14	.42
31	15	68	2.8	--	--	--	11	18	.53
TOTAL	578	--	78.66	440	--	34.82	391	--	17.53

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	11	4	.12	9.6	31	.80	8.4	23	.52
2	11	5	.15	10	29	.78	17	180	8.3
3	11	18	.53	10	33	.89	14	360	14
4	11	18	.53	9.6	40	1.0	10	120	3.2
5	11	15	.45	9.2	25	.62	9.2	70	1.7
6	12	7	.23	9.2	25	.62	29	329	66
7	12	9	.29	11	25	.74	30	801	65
8	12	17	.55	11	32	.95	9.6	170	4.4
9	13	14	.49	11	19	.56	8.8	61	1.4
10	12	13	.42	10	16	.43	7.6	38	.78
11	12	12	.39	8.8	26	.62	11	75	2.2
12	12	14	.45	9.2	24	.60	14	610	23
13	12	13	.42	9.2	22	.55	21	1050	74
14	11	15	.45	8.8	21	.50	18	215	19
15	12	9	.29	10	20	.54	13	330	12
16	12	17	.55	11	19	.56	10	90	2.4
17	12	10	.32	11	9	.27	8.4	39	.88
18	12	9	.29	9.6	12	.31	8.4	21	.48
19	12	11	.36	8.8	3	.07	7.2	14	.27
20	11	14	.42	8.4	5	.11	6.5	13	.23
21	12	16	.52	8.4	12	.27	7.2	14	.27
22	11	11	.33	8.4	8	.18	6.2	15	.25
23	11	12	.36	9.2	2	.05	8.4	21	.48
24	11	15	.45	8.4	7	.16	7.2	24	.47
25	11	10	.30	10	5	.14	5.0	9	.12
26	11	6	.18	11	5	.15	4.1	32	.35
27	11	42	1.2	10	6	.16	3.6	31	.30
28	11	13	.39	7.6	12	.25	3.4	30	.28
29	11	37	1.1	7.6	14	.29	3.6	31	.30
30	9.6	16	.41	12	16	.52	2.6	20	.14
31	--	--	--	12	94	3.0	--	--	--
TOTAL	343.6	--	12.94	300.0	--	16.69	312.4	--	302.72

09471000 SAN PEDRO RIVER AT CHARLESTON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2.2	23	.14	8.8	109	2.6	45	1500	182
2	2.1	18	.10	7.6	78	1.6	124	8910	3150
3	1.9	6	.03	6.2	76	1.3	547	19800	32000
4	1.8	11	.05	5.9	27	.43	97	9700	2540
5	2.3	12	.07	8.0	1000	22	53	1500	215
6	3.6	12	.12	137	16200	7860	36	236	23
7	6.2	302	24	150	9960	5310	37	197	20
8	6.2	1300	22	29	7400	579	29	220	17
9	2.8	88	.67	91	3750	2150	23	161	10
10	2.3	48	.30	47	3690	629	19	102	5.2
11	2.1	40	.23	34	1200	110	25	242	16
12	2.1	32	.18	321	5810	12900	20	263	14
13	2.1	37	.21	178	11200	7450	15	189	7.7
14	7.2	3060	348	27	1300	95	110	11400	5220
15	125	18800	6980	14	134	5.1	58	9700	1520
16	531	25000	48700	8.8	107	2.5	37	4300	430
17	169	20100	11000	28	911	323	25	563	38
18	439	5700	9370	14	900	34	21	220	12
19	63	2000	340	8.8	114	2.7	16	172	7.4
20	36	500	49	7.2	64	1.2	14	136	5.1
21	25	165	11	6.2	50	.84	12	61	2.0
22	39	5870	944	5.3	30	.43	12	24	.78
23	138	8700	3080	4.5	17	.21	11	55	1.6
24	63	6800	1160	3.6	22	.21	10	33	.89
25	152	13000	6020	3.4	20	.18	9.6	28	.73
26	61	6700	1100	2060	8660	99400	9.2	32	.79
27	27	700	51	873	11700	27600	8.8	28	.67
28	24	390	25	108	4700	1370	8.0	41	.89
29	18	410	20	64	950	164	7.6	28	.57
30	13	180	6.3	114	2840	1190	7.2	38	.74
31	10	75	2.0	50	1800	243	--	--	--
TOTAL	1977.9	--	89254.40	4423.3	--	167448.30	1446.4	--	45442.06

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 12494.6
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) 309764.99

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
JULY												
15...	1030	23.5	471	38700	49200	45	55	82	--	93	100	--
23...	1330	[illegible]	269	11900	8640	42	57	81	--	95	100	--
25...	0845	19.0	774	20700	43300	37	49	74	--	94	100	--
27...	0710	27.0	15	70000	2840	68	88	99	100	--	--	--
AUG.												
06...	1800	26.0	113	29800	9090	44	63	86	--	98	100	--
09...	0715	25.0	155	142000	59400	35	52	82	--	98	100	--
26...	1930	19.5	4930	15100	201000	35	49	69	--	87	99	100
27...	0710	25.0	3400	101000	927000	42	52	79	--	95	100	--
SEP.												
08...	1830	32.0	358	103000	99600	46	57	86	--	97	100	--

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.

LOCATION.--Lat 32°07'35", long 110°17'22", in SW¼ sec. 15, T. 15 S., R. 20 E., Cochise County, at gaging station 6 miles downstream from Tres Alamos Wash, and 11 miles north of Benson.

DRAINAGE AREA.--2,500 sq mi, of which 696 sq mi is in Mexico.

PERIOD OF RECORD.--Sediment records: March 1966 to September 1972.

EXTREMES.--1971-72:

Sediment concentrations: Maximum daily, 56,100 mg/l July 16; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 568,000 tons Aug. 26; minimum daily, 0 tons on many days.

Period of record:

Sediment concentrations (1968-72): Maximum daily, 78,600 mg/l July 28, 1969; minimum daily, no flow on many days each year.
Sediment discharge (1968-72): Maximum daily, 602,000 tons Aug. 20, 1971; minimum daily, 0 tons on many days each year.

REMARKS.--Records of temperature and specific conductance of individual samples available in district office at Tucson, Ariz.

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0
8	60	40000	6480	0	0	0	0	0	0
9	15	20000	810	0	0	0	0	0	0
10	6.9	5000	93	0	0	0	0	0	0
11	1.4	2000	7.6	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	1.8	1000	4.9	0	0	0	0	0	0
25	2.3	2000	12	0	0	0	0	0	0
26	58	30000	4700	0	0	0	0	0	0
27	51	20000	2750	0	0	0	0	0	0
28	27	10000	729	0	0	0	0	0	0
29	5.0	5000	203	0	0	0	0	0	0
30	1.0	1000	2.7	0	0	0	0	0	0
31	0	0	0	--	--	--	0	0	0
TOTAL	229.4	--	15792.2	0	--	0	0	--	0

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0
7	3.6	3000	29	0	0	0	0	0	0
8	2.8	2000	15	0	0	0	0	0	0
9	.80	500	1.1	0	0	0	0	0	0
10	.10	200	.05	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	--	--	--	0	0	0
31	0	0	0	--	--	--	0	0	0
TOTAL	7.30	--	45.15	0	--	0	0	--	0

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	302	15100	59400
7	0	0	0	0	0	0	318	49000	54100
8	0	0	0	0	0	0	2.9	5960	78
9	0	0	0	0	0	0	64	13400	5620
10	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	3.2	1200	100
13	0	0	0	0	0	0	264	39300	35600
14	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0
18	0	0	0	0	0	0	0	0	0
19	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	56	27000	15200
23	0	0	0	0	0	0	10	0	0
24	0	0	0	0	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0
26	0	0	0	0	0	0	0	0	0
27	0	0	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0
31	--	--	--	0	0	0	--	--	--
TOTAL	0	--	0	0	--	0	1020.1	--	170098

09471800 SAN PEDRO RIVER NEAR BENSON, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	0	0	0	1.0	3000	8.1	42	15000	1700
2	0	0	0	0	0	0	59	21500	3420
3	0	0	0	0	0	0	295	37000	29500
4	0	0	0	0	0	0	213	41000	23600
5	0	0	0	0	0	0	98	32000	8470
6	0	0	0	0	0	0	60	20000	3240
7	17	2400	783	47	11500	3190	164	20200	16900
8	4.0	2170	83	60	19000	3080	163	32800	17400
9	0	0	0	71	26900	7190	66	18000	5360
10	0	0	0	70	49000	9260	158	31600	15500
11	0	0	0	31	38000	3180	78	15000	3160
12	0	0	0	229	29400	29700	25	9000	608
13	7.0	26700	1130	1120	41400	180000	130	8270	18900
14	0	0	0	68	16000	2940	62	13800	6700
15	0	0	0	17	11500	528	42	18300	3260
16	197	56100	43900	1.0	2000	5.4	46	21500	2670
17	498	51100	83000	0	0	0	25	13000	878
18	239	--	--	8.9	9390	684	10	6000	162
19	126	28000	9530	2.4	10200	66	5.0	3000	41
20	25	14000	945	0	0	0	2.0	1500	8.1
21	2.0	4000	22	0	0	0	1.0	1000	2.7
22	0	0	0	0	0	0	0	0	0
23	20	44000	2380	0	0	0	0	0	0
24	127	38400	19400	0	0	0	0	0	0
25	264	42500	35700	0	0	0	0	0	0
26	123	27500	9130	2420	37300	568000	0	0	0
27	20	25000	1350	2190	39100	279000	0	0	0
28	15	17000	689	229	16700	12800	0	0	0
29	192	24800	16100	108	8000	2330	0	0	0
30	10	15000	405	148	25500	13200	0	0	0
31	5.0	8000	108	77	15000	3120	--	--	--
TOTAL	1891.0	--	224655	6908.3	--	1118281.5	1744.0	--	161479.8

TOTAL DISCHARGE FOR YEAR (CFS-DAYS) 11800.10
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS) 1690351.65

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
JUNE 13...	1600	30.0	41	35700	3950	46	69	94	100	--
JULY 24...	1400	29.0	71	31500	6040	53	66	92	98	100
AUG. 26...	1600	22.0	3750	87000	881000	27	40	62	91	100
SEP. 07...	1500	25.0	42	38900	4410	35	43	63	91	100

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.

LOCATION.--Lat 32°58'38", long 110°46'11", in SE¼SW¼ sec. 24, T. 5 S., R. 15 E., Pinal County, at gaging station 0.7 mile south of Winkelman, and 1.0 mile upstream from mouth.

DRAINAGE AREA.--4,471 sq mi, of which 696 sq mi is in Mexico.

PERIOD OF RECORD.--Specific conductance: January 1966 to September 1972.
Water temperatures: January 1966 to September 1972.
Sediment records: January 1966 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 1,350 micromhos June 10; minimum daily, 355 micromhos Oct. 18.
Water temperatures: Maximum, 36.0°C Sept. 30; minimum, 7.0°C Dec. 11.
Sediment concentrations: Maximum daily, 138,000 mg/l June 14; minimum daily, no flow on many days.
Sediment discharge: Maximum daily, 537,000 tons Aug. 27; minimum daily, 0 tons on many days.

Period of record:
Specific conductance: Maximum daily, 2,050 micromhos Sept. 15, 1969; minimum daily, 300 micromhos Oct. 4, 1970.
Water temperatures: Maximum, 42.0°C Sept. 10, 1968; minimum, 2.0°C Dec. 31, 1966.
Sediment concentrations: Maximum daily, 138,000 mg/l June 14, 1972; minimum daily, 0 tons on many days.
Sediment discharge: Maximum daily, 961,000 tons Dec. 20, 1967; minimum daily, 0 tons on many days.

REMARKS.--No flow many days each year.

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	400	1190	1150	1180	1250	1200	1300	---	---	1200	1000	710
2	1050	1150	1150	1180	1100	1150	1300	---	---	---	1190	840
3	1150	1100	1150	1180	1150	1180	1300	---	---	---	1190	430
4	1150	1100	1050	1180	1150	1180	1300	---	---	---	1190	640
5	1150	1100	1100	1200	1150	1180	1300	---	---	---	1200	540
6	1050	1100	1100	1250	1150	1250	---	---	---	---	525	690
7	1100	1100	1150	1250	1150	1000	---	---	625	---	650	970
8	1200	1100	1200	1200	1150	1200	---	---	700	---	440	650
9	1100	1100	1150	1250	1150	1200	---	---	960	---	660	530
10	1100	1100	1150	1250	1150	1200	---	---	1350	---	580	875
11	1100	1100	1150	1250	1150	1200	---	---	950	---	960	695
12	1100	1100	1100	1250	1150	1200	---	---	1200	---	960	525
13	1100	1100	1100	1200	1150	1200	---	---	1000	---	620	750
14	1100	1100	1100	1250	1150	1200	---	---	650	---	497	780
15	1100	1100	1050	1250	1150	1200	---	---	775	---	520	650
16	1300	1100	1150	1250	1150	1200	---	---	1020	460	800	1010
17	800	425	1150	1250	1150	1200	---	---	1200	475	1000	980
18	355	840	1150	1250	1150	1250	---	---	1200	525	1150	1000
19	750	1100	1150	1250	1150	1250	---	---	1200	550	790	1000
20	950	1100	1200	1250	1150	1300	---	---	1200	612	800	1190
21	1050	1100	1150	1250	1150	1300	---	---	1200	1000	1100	1100
22	1100	1100	1150	1250	1150	1300	---	---	1200	590	1190	1150
23	1100	1100	1180	1250	1150	1300	---	---	600	375	---	1050
24	1100	1100	1180	1250	1150	1200	---	---	600	---	---	1090
25	1100	1100	1150	1250	1150	1200	---	---	800	550	---	1100
26	1100	1100	1100	1250	1200	1300	---	---	1180	575	---	1000
27	1100	1100	1050	1250	1200	1300	---	---	1200	---	497	1010
28	1100	1190	1100	1250	1200	1300	---	---	1180	1150	455	1050
29	1100	1190	1180	1250	1200	1300	---	---	1200	900	500	1050
30	1100	1190	1180	1250	---	1300	---	---	1200	650	680	1110
31	1190	---	1180	1250	---	1300	---	---	---	600	515	---
AVG	1040	1080	1140	1240	1160	1230	---	---	1020	---	802	872

YEARLY MAXIMUM = 1350 YEARLY MINIMUM = 355 YEARLY AVERAGE = 1050

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21.5	24.0	18.0	22.0	17.0	25.0	34.0	---	---	28.0	24.0	28.0
2	28.0	26.0	20.0	20.0	18.0	26.0	30.0	---	---	---	24.0	25.0
3	27.0	26.0	---	17.0	20.0	28.0	31.0	---	---	---	23.0	32.0
4	24.0	12.0	13.0	16.0	16.0	28.0	30.0	---	---	---	25.0	25.0
5	21.0	29.0	19.0	17.0	21.0	30.0	33.0	---	---	---	32.0	25.0
6	27.0	18.0	18.0	14.0	23.0	28.0	---	---	---	---	34.0	25.0
7	32.0	14.0	15.0	17.0	22.0	29.0	---	---	25.0	---	26.0	31.0
8	18.0	15.0	14.0	21.0	24.0	32.0	---	---	26.5	---	25.0	29.5
9	22.0	18.0	16.0	19.0	20.0	30.0	---	---	25.5	---	28.5	27.5
10	25.0	23.0	15.0	20.0	22.0	26.0	---	---	28.0	---	30.5	27.0
11	24.0	18.0	7.0	20.0	18.0	30.0	---	---	22.0	---	34.0	25.0
12	22.0	20.0	16.0	21.0	18.0	30.0	---	---	23.0	---	32.0	27.0
13	24.0	19.0	11.0	18.0	26.0	31.0	---	---	22.0	---	26.0	24.0
14	22.0	17.0	15.0	19.0	23.0	23.0	---	---	28.0	---	28.5	24.0
15	19.0	17.0	17.0	20.0	25.0	29.0	---	---	23.0	---	23.0	23.0
16	26.0	18.0	19.0	19.0	22.0	32.0	---	---	32.0	34.5	22.0	34.0
17	16.0	15.0	12.0	21.0	26.0	33.0	---	---	26.0	29.5	22.0	33.0
18	14.5	14.0	13.0	22.0	18.0	22.0	---	---	18.0	35.0	32.0	24.0
19	22.0	15.0	20.0	21.0	23.0	34.0	---	---	18.0	26.0	31.0	28.0
20	12.0	21.0	20.0	18.0	26.0	18.0	---	---	21.0	30.0	23.0	18.0
21	22.0	16.0	17.0	19.0	26.0	33.0	---	---	22.0	30.0	23.0	18.0
22	23.0	16.0	18.0	22.0	26.0	19.0	---	---	23.0	23.0	21.0	31.0
23	21.0	12.0	23.0	22.0	26.0	31.0	---	---	24.5	33.0	---	30.0
24	21.0	9.0	21.0	21.0	25.0	14.0	---	---	26.0	---	---	17.0
25	19.0	15.0	18.0	23.0	27.0	28.0	---	---	18.0	26.0	---	15.0
26	13.0	17.0	19.0	18.0	27.0	28.0	---	---	18.0	31.0	---	15.0
27	19.0	25.0	21.0	23.0	27.0	27.0	---	---	18.0	27.0	26.5	17.0
28	16.0	20.0	17.0	20.0	29.0	27.0	---	---	17.0	32.0	25.5	16.0
29	16.0	15.0	20.0	20.0	27.0	26.0	---	---	18.0	33.0	32.0	15.0
30	20.0	19.0	20.0	17.0	---	28.0	---	---	22.0	30.0	25.0	36.0
31	17.0	---	17.0	21.0	---	23.0	---	---	---	28.0	29.0	---
AVG	21.0	18.0	17.0	19.5	23.0	27.5	---	---	22.5	---	27.0	25.0

YEARLY MAXIMUM = 36.0   YEARLY MINIMUM = 7.0   YEARLY AVERAGE = 23.0

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	903	26700	94000	7.5	1700	34	1.9	32	.16
2	40	33500	3620	7.5	1650	33	1.9	42	.22
3	15	16500	668	4.9	825	11	2.6	52	.37
4	9.0	3000	73	4.4	530	6.3	4.4	105	1.2
5	7.5	1000	20	4.4	465	5.5	4.4	44	.52
6	6.1	540	8.9	4.4	490	5.8	4.9	49	.65
7	3.9	414	4.4	2.6	525	3.7	6.8	72	1.3
8	16	19900	1190	2.2	270	1.6	13	580	20
9	2.2	2000	12	4.1	250	2.8	14	690	26
10	4.4	2100	25	6.1	260	4.3	12	760	25
11	3.9	9000	95	6.1	230	3.8	12	430	14
12	.60	2250	3.6	4.9	210	2.8	13	500	18
13	0	800	0	4.9	235	3.1	11	290	8.6
14	0	500	0	4.9	220	2.9	16	520	22
15	0	350	0	6.8	480	8.8	20	590	32
16	.40	2100	2.3	13	625	22	16	390	17
17	252	32200	31300	144	3250	1600	12	210	6.8
18	388	10000	10500	26	900	63	12	210	6.8
19	23	1000	62	1.9	200	1.0	12	170	5.5
20	3.0	129	1.0	1.9	133	.68	11	145	4.3
21	2.2	140	.83	1.9	104	.53	12	170	5.5
22	2.2	96	.57	2.2	99	.59	11	205	6.1
23	1.9	90	.46	2.2	95	.56	11	190	5.6
24	1.9	48	.25	1.9	68	.35	12	185	6.0
25	1.9	72	.37	2.2	85	.50	13	190	6.7
26	2.6	97	.68	1.6	54	.23	16	210	9.1
27	2.2	53	.31	1.9	48	.25	23	1180	73
28	5.5	2300	34	1.9	29	.15	25	4500	304
29	25	14900	1010	1.9	21	.11	19	2130	109
30	23	9300	578	2.2	20	.12	18	650	32
31	13	3600	126	--	--	--	16	520	22
TOTAL	1759.40	--	143336.67	202.4	--	1819.47	376.9	--	789.42

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ. --Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	16	4[illegible]	18	4.9	82	1.1	6.1	219	3.6
2	16	310	13	4.9	181	2.4	5.5	135	2.0
3	13	270	9.5	4.9	145	1.9	6.1	174	2.9
4	10	250	6.8	4.9	184	2.4	5.5	92	1.4
5	5.5	195	2.9	5.5	160	2.4	4.4	122	1.4
6	3.9	440	4.6	4.9	157	2.1	4.4	53	.63
7	3.0	360	2.9	6.1	135	2.2	4.4	133	1.6
8	2.6	240	1.7	6.1	153	2.5	2.6	108	.76
9	1.9	170	.87	6.8	147	2.7	3.0	100	.81
10	1.1	145	.43	6.8	141	2.6	3.4	89	.82
11	1.6	260	1.1	7.5	180	3.6	3.9	102	1.1
12	2.2	215	1.3	6.8	155	2.8	2.2	97	.58
13	2.2	170	1.0	6.1	95	1.6	1.6	59	.25
14	1.9	195	1.0	6.8	138	2.5	1.3	50	.18
15	1.1	140	.42	7.5	114	2.3	1.1	84	.25
16	1.1	101	.30	6.8	144	2.6	.90	50	.12
17	1.1	108	.32	7.5	218	4.4	.70	30	.06
18	.90	109	.26	7.5	158	3.2	.60	75	.12
19	.90	87	.21	6.8	198	3.6	.30	29	.03
20	1.1	102	.30	5.5	90	1.3	.20	171	.09
21	1.3	100	.35	4.9	112	1.5	.20	18	.01
22	1.6	106	.46	3.9	157	1.7	.20	24	.01
23	1.9	94	.48	4.9	113	1.5	.30	24	.02
24	1.6	79	.34	4.9	147	1.9	.40	54	.06
25	2.2	89	.53	4.9	199	2.6	.30	14	.01
26	2.6	105	.74	5.5	186	2.8	.20	20	.01
27	3.0	97	.79	6.1	177	2.9	.20	21	.01
28	3.4	121	1.1	5.5	134	2.0	.20	22	.01
29	3.9	123	1.3	6.8	221	4.1	.10	18	0
30	4.4	82	.97	--	--	--	.20	36	.02
31	5.5	77	1.1	--	--	--	.20	20	.01
TOTAL	118.50	--	75.07	172.0	--	71.2	60.70	--	18.87

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.20	9	0	0	0	0	0	0	0
2	.20	17	.01	0	0	0	0	0	0
3	.20	10	.01	0	0	0	12	2000	65
4	.10	12	0	0	0	0	2.8	400	3.0
5	.30	4	0	0	0	0	0	0	0
6	.30	4	0	0	0	0	0	0	0
7	.20	4	0	0	0	0	168	64100	69800
8	.30	4	0	0	0	0	92	95000	23600
9	.20	4	0	.70	20	.04	15	50000	2030
10	0	0	0	0	0	0	14	39600	2190
11	0	0	0	0	0	0	2.0	52000	281
12	0	0	0	0	0	0	.50	20000	27
13	.60	10	.02	0	0	0	17	48300	3730
14	0	0	0	0	0	0	80	138000	33400
15	0	0	0	0	0	0	5.0	61000	824
16	0	0	0	0	0	0	2.0	37000	200
17	0	0	0	0	0	0	.50	6000	8.1
18	0	0	0	0	0	0	.30	730	.59
19	0	0	0	0	0	0	.20	610	.33
20	0	0	0	0	0	0	.20	320	.17
21	0	0	0	0	0	0	.10	190	.05
22	0	0	0	0	0	0	.10	160	.04
23	0	0	0	0	0	0	40	55500	8680
24	0	0	0	0	0	0	10	107000	2890
25	0	0	0	0	0	0	2.0	37000	200
26	0	0	0	0	0	0	1.0	5000	14
27	0	0	0	0	0	0	.50	820	1.1
28	0	0	0	0	0	0	.20	310	.17
29	0	0	0	0	0	0	.20	290	.16
30	0	0	0	0	0	0	.10	184	.05
31	--	--	--	0	0	0	--	--	--
TOTAL	2.60	--	.04	.70	--	.04	465.70	--	147944.76

09473500 SAN PEDRO RIVER AT WINKELMAN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	.10	138	.04	1.3	8100	28	30	39000	3160
2	0	0	0	.40	588	.64	10	41000	1110
3	0	0	0	.60	405	.66	621	33800	106000
4	0	0	0	.40	251	.27	.10	13000	3.5
5	0	0	0	.20	139	.08	15	66000	2670
6	0	0	0	17	43300	3740	13	45500	1600
7	0	0	0	41	26100	7730	4.9	30000	397
8	0	0	0	23	41000	2550	120	58800	27700
9	0	0	0	57	76600	16200	219	59300	48000
10	0	0	0	13	75000	2630	494	65500	100000
11	0	0	0	11	53000	1570	170	55500	25500
12	0	0	0	72	62600	14300	117	37000	11700
13	0	0	0	964	73100	220000	48	53000	6870
14	0	0	0	132	69000	24600	142	53400	24100
15	0	0	0	48	44000	5700	110	59000	17500
16	93	37000	18200	34	23000	2110	25	23000	1550
17	240	70300	71700	20	6000	324	14	46000	1740
18	205	91000	50400	16	1500	65	13	28000	983
19	96	97800	27600	18	13800	845	12	21500	697
20	58	82000	12800	13	4000	140	7.5	9000	182
21	20	56000	3020	.20	164	.09	5.5	2200	33
22	15	30000	1220	.10	239	.06	3.4	730	6.7
23	53	39000	7260	0	0	0	2.2	390	2.3
24	1.0	21000	57	0	0	0	1.9	200	1.0
25	82	18700	8210	0	0	0	1.1	170	.50
26	106	90600	28600	0	0	0	.90	140	.34
27	15	65500	2650	2360	64300	537000	.90	100	.24
28	21	68500	4010	518	51800	74600	.90	68	.17
29	3.0	31000	251	145	46000	18000	.90	72	.17
30	45	110000	16000	66	40500	7220	.40	30	.03
31	11	70000	2080	97	59400	17200	--	--	--
TOTAL	1064.10	--	254058.04	4668.20	--	956553.80	2203.60	--	381506.95
TOTAL DISCHARGE FOR YEAR (CFS-DAYS)									11174.80
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)									1886174.33

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972 (ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM
DEC.							
28...	1610	17.0	25	5330	360	61	82
JUNE							
07...	2010	25.0	435	127000	149000	40	50
23...	0700	24.0	69	74500	13900	46	60
JULY							
17...	1630	31.0	390	101000	106000	40	51
20...	0710	25.0	72	85000	16500	63	81

DATE	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. SIEVE DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. SIEVE DIAM. % FINER THAN .125 MM	SUS. SED. SIEVE DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM
DEC.						
28...	97	99	--	99	100	--
JUNE						
07...	82	--	97	--	--	100
23...	92	--	100	--	--	--
JULY						
17...	80	--	98	--	--	100
20...	97	--	100	--	--	--

09474000 GILA RIVER AT KELVIN, ARIZ.

(Irrigation network station)

LOCATION.--Lat 33°06'11", long 110°58'26", in NE¼NW¼ sec. 12, T. 4 S., R. 13 E., Pinal County, at Florence-Kelvin road bridge at Kelvin, 200 ft upstream from Mineral Creek, 700 ft upstream from gaging station, 18 miles downstream from San Pedro River, and 19 miles upstream from Ashurst-Hayden Dam.

DRAINAGE AREA.--18,011 sq mi at gaging station, of which 5,125 sq mi is below Coolidge Dam.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1972.
Water temperatures: December 1950 to September 1972.
Sediment records: January 1958 to September 1972.

EXTREMES.--1971-72:
Dissolved solids: Maximum, 2,400 mg/l June 1-30; minimum, 402 mg/l Sept. 30.
Hardness: Maximum, 1,300 mg/l July 1-10; minimum, 210 mg/l Sept. 19-20.
Specific conductance: Maximum daily, 2,560 micromhos Nov. 28; minimum daily, 406 micromhos Oct. 18.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	MEAN DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
OCT.												
01...	2550	19	10	77	11	20	6.9	223	0	86	17	.3
02...	300	21	0	81	14	59	6.1	145	0	160	79	.5
03-17	70	28	0	220	38	210	17	208	0	660	240	1.3
18...	1300	24	0	51	7.0	21	3.6	122	0	76	17	.4
19-20	212	26	10	74	13	60	5.4	143	0	170	66	.5
21-31	41	27	0	190	33	190	15	222	0	530	230	1.2
NOV.												
01-17	31	28	10	200	41	230	16	229	0	620	280	1.4
18...	48	29	40	100	18	90	7.8	169	0	270	85	.9
19-30	24	29	0	200	43	230	15	254	0	590	290	1.1
DEC.												
01-31	164	24	0	130	31	210	13	227	0	330	320	1.1
JAN.												
01-31	163	24	10	120	28	200	8.3	228	0	240	320	1.0
FEB.												
01-29	256	30	20	120	28	230	9.2	233	0	240	350	1.1
MAR.												
01-31	481	24	10	100	26	230	7.1	210	0	190	350	1.0
APR.												
01-30	304	21	20	93	24	200	7.8	210	0	180	300	1.0
MAY												
01-31	293	20	20	90	24	210	7.9	221	0	170	310	.8
JUNE												
01-30	324	22	50	96	25	210	8.7	219	0	170	330	1.4
JULY												
01-31	437	22	20	95	27	230	9.0	208	0	170	370	1.0
AUG.												
01-12	418	23	10	90	28	250	8.9	207	0	170	400	.9
13-14	1030	27	10	100	19	99	6.8	284	0	160	120	.8
15-26	250	22	10	100	28	250	11	195	0	240	390	1.1
27-28	1320	21	50	57	11	68	5.9	193	0	110	53	1.0
29-30	158	21	10	83	18	120	8.4	183	0	200	150	1.0
31...	108	32	10	77	14	66	6.0	268	0	100	57	.6
SEP.												
01-02	82	19	9	140	28	180	12	145	0	430	220	1.3
03...	700	25	9	79	13	52	5.3	230	0	100	56	.6
04-08	172	16	9	89	20	190	9.9	179	0	210	250	1.0
09...	266	28	20	89	17	54	5.3	345	0	82	40	.6
10...	117	21	9	160	28	110	8.7	178	0	420	110	.8
11-12	382	29	9	98	15	54	5.1	323	0	90	56	.6
13-30	91	22	20	90	17	130	8.6	180	0	210	150	1.2
WTD. AVG.	--	23	18	100	25	200	8.5	215	0	199	302	1.0
TIME WTD. AVG.	269	24	15	118	27	206	9.9	216	0	269	302	1.1
TOT. LOAD (TONS)	--	6150	5	26700	6630	53100	2270	57200	0	52900	80400	266

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

EXTREMES, 1971-72:--Continued
Water temperatures: Maximum, 31.0°C July 31, Aug. 1; minimum, 7.0°C Dec. 16, 17.
Sediment concentrations: Maximum daily, 63,200 mg/l Sept. 9; minimum daily, 30 mg/l Dec. 2.
Sediment discharge: Maximum daily, 346,000 tons Aug. 27; minimum daily, 1.9 tons Dec. 2.

Period of record:
Dissolved solids: Maximum, 4,330 mg/l Jan. 3, 1966; minimum, 294 mg/l Sept. 24, 1954, Feb. 12, 1963.
Hardness: Maximum, 2,610 mg/l Jan. 3, 1966; minimum, 152 mg/l Sept. 1-30, 1957.
Specific conductance: Maximum daily, 5,120 micromhos May 22, 1961; minimum daily, 406 micromhos Oct. 18, 1971.
Water temperatures: Maximum, 36.5°C July 25, Aug. 20, 1953; minimum, 3.5°C Jan. 13, 1962.
Sediment concentrations: Maximum daily, 153,000 mg/l July 30, 1961; minimum daily, 0 mg/l July 3, 1971.
Sediment discharge: Maximum daily, 740,000 tons Dec. 23, 1965; minimum daily, 0 ton on July 2-5, 11, 1971.

REMARKS.--No appreciable inflow from Mineral Creek between sampling point and gaging station except during periods of heavy local rains. Sediment discharge figures include sediment load from Mineral Creek.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	DIS-SOLVED SOLIDS (TONS PER DAY)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.												
01...	.33	.21	70	--	349	.47	2400	240	55	.6	552	7.2
02...	1.7	.40	70	--	500	.68	405	260	140	1.6	811	7.5
03-17	1.1	.15	220	--	1520	2.07	287	710	540	3.4	2170	8.0
18...	1.7	.43	60	--	268	.36	941	160	56	.7	406	7.7
19-20	1.5	.31	90	--	492	.67	282	240	120	1.7	784	7.8
21-31	1.1	.18	190	--	1330	1.81	147	610	430	3.3	1970	7.9
NOV.												
01-17	.35	.03	250	--	1530	2.08	128	670	480	3.9	2260	8.0
18...	.65	.18	110	--	687	.93	89.0	320	190	2.2	1060	7.6
19-30	.26	.06	240	--	1520	2.07	98.5	680	470	3.8	2260	8.1
DEC.												
01-31	.81	.12	220	--	1170	1.59	518	450	270	4.3	1900	8.0
JAN.												
01-31	.67	.00	210	--	1060	1.44	467	410	230	4.3	1780	8.1
FEB.												
01-29	.56	.15	250	--	1130	1.54	781	410	220	4.9	1920	8.1
MAR.												
01-31	.41	.21	240	--	1030	1.40	1340	360	180	5.3	1800	7.8
APR.												
01-30	.17	.15	190	--	931	1.27	764	330	160	4.8	1610	7.2
MAY												
01-31	.04	.09	200	--	942	1.28	745	320	140	5.1	1650	8.2
JUNE												
01-30	.29	.12	220	--	972	1.32	850	340	160	4.9	1730	7.8
JULY												
01-31	.26	.21	230	1110	1030	1.51	1310	350	180	5.4	1850	7.6
AUG.												
01-12	.14	.21	360	1170	1070	1.59	1320	340	170	5.9	1910	7.7
13-14	.12	.18	180	716	673	.97	1990	330	95	2.4	1110	7.6
15-26	.29	.21	270	1260	1140	1.71	850	360	200	5.7	1980	7.9
27-28	.57	.18	170	428	425	.58	1530	190	29	2.2	693	7.3
29-30	.39	.18	170	732	693	1.00	312	280	130	3.1	1160	7.6
31...	.64	.49	120	498	488	.68	145	250	30	1.8	795	7.4
SEP.												
01-02	.90	.03	180	1190	1110	1.62	263	460	350	3.6	1650	8.0
03...	.01	.03	110	466	444	.63	881	250	62	1.4	718	7.4
04-08	.53	.06	210	972	879	1.32	451	300	160	4.7	1460	8.0
09...	.04	.06	110	504	486	.69	362	290	9	1.4	779	7.5
10...	.03	.06	140	1090	946	1.48	344	510	370	2.1	1440	7.7
11-12	.05	.15	100	556	507	.76	573	310	42	1.3	807	7.3
13-30	.69	.18	160	796	724	1.08	196	290	150	3.3	1160	7.8
WTD. AVG.	.38	.16	217	--	966	1.35	--	353	176	4.6	1660	7.8
TIME WTD. AVG.	.46	.14	219	--	1060	1.48	--	406	229	4.5	1770	7.9
TOT. LOAD (TONS)	101	43	58	--	257000	--	--	--	--	--	--	--

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	552	1990	2280	1810	---	1870	1660	1520	1690	1810	1870	1380
2	811	2060	2380	1930	1690	1930	1620	1580	1660	1800	1900	1920
3	1510	2060	2220	---	1830	2010	1630	1580	1690	1770	1900	718
4	1620	2060	1830	1980	1640	1900	1620	1530	1680	1790	1880	1420
5	1770	2140	1860	2030	1750	1810	1620	1540	1680	1800	---	1230
6	1950	2230	2220	1920	1710	1860	1660	1560	1660	1800	1880	1480
7	2190	2230	2220	1950	1680	1980	1660	1580	1690	1830	1920	1550
8	2260	2250	2120	1990	1720	---	1510	1610	1400	1820	1690	1610
9	2140	2310	1950	1980	1760	1680	1580	1570	1620	1820	1920	779
10	2260	2330	1810	1960	1840	1940	---	1580	1680	1830	1910	1440
11	2300	2330	---	1900	1880	1810	1600	1590	1660	1850	1940	740
12	1980	2330	1860	1870	1880	1760	1580	1620	1690	1840	1940	885
13	2190	2360	1860	1810	1880	1940	1590	1640	1680	1810	1060	1420
14	2300	2360	1950	1880	1910	1780	1590	1600	1440	1880	1120	1170
15	2360	2290	1760	1800	1940	1790	1560	1580	1660	1870	1520	1270
16	2390	2100	1930	1620	1910	1850	1520	1580	1730	1910	1860	1500
17	2320	1730	1750	1540	1790	1820	1530	1580	1750	1860	2010	1520
18	406	1060	1840	1620	1880	1870	1580	1590	1730	1560	2010	1460
19	582	1620	1510	1630	1920	1600	1570	1600	1730	1800	2010	1380
20	952	1980	---	1650	1910	1690	1600	1630	1720	1670	1990	1210
21	1440	2080	1700	1620	1940	1690	1540	1650	1730	1850	1990	1190
22	1670	---	1670	1620	1980	1740	1540	1640	1730	1870	2010	1140
23	1830	2260	1700	1530	2000	1810	1550	1640	1700	1670	2030	991
24	1900	2250	---	1500	1990	1650	1580	1660	1700	1870	1990	941
25	2000	---	1600	---	1950	1650	1540	1640	---	1740	2010	974
26	2000	2420	1600	1520	2070	1750	1550	1650	1760	1640	1970	961
27	2100	2340	1550	1530	1950	1590	---	1640	1780	1830	681	937
28	2100	2560	1640	1580	1570	1540	1560	1640	1790	1850	655	937
29	2290	2320	1640	1580	---	1690	1540	1650	1790	1830	908	945
30	1850	2230	1800	1580	---	1580	1530	1640	1820	1670	1370	921
31	1910	---	1760	1690	---	1680	---	1640	---	1800	795	---
AVG	1800	2150	1860	1750	1870	1780	1580	1600	1690	1800	1690	1200

YEARLY AVERAGE = 1730

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	17.0	14.0	---	---	14.0	16.0	21.0	25.0	28.0	31.0	28.0
2	22.0	17.0	14.0	---	9.0	14.0	17.0	21.0	26.0	27.0	30.0	28.0
3	24.0	18.0	10.0	---	9.0	14.0	19.0	21.0	26.0	27.0	28.0	28.0
4	22.0	18.0	10.0	---	10.0	15.0	19.0	20.0	26.0	27.0	30.0	29.0
5	22.0	17.0	10.0	---	11.0	15.0	19.0	21.0	25.0	27.0	---	28.0
6	24.0	19.0	8.0	---	12.0	15.0	20.0	21.0	26.0	27.0	28.0	28.0
7	25.0	19.0	8.0	---	12.0	15.0	19.0	21.0	26.0	27.0	30.0	28.0
8	25.0	19.0	8.0	---	13.0	---	19.0	21.0	24.0	26.0	28.0	27.0
9	25.0	19.0	8.0	11.0	14.0	17.0	19.0	20.0	25.0	27.0	27.0	26.0
10	22.0	18.0	9.0	11.0	14.0	16.0	---	21.0	26.0	28.0	28.0	27.0
11	22.0	19.0	---	10.0	13.0	15.0	19.0	22.0	26.0	28.0	28.0	27.0
12	23.0	17.0	8.0	9.0	12.0	15.0	20.0	22.0	26.0	28.0	28.0	25.0
13	25.0	18.0	8.0	10.0	11.0	15.0	17.0	22.0	26.0	28.0	26.0	26.0
14	25.0	17.0	8.0	10.0	11.0	15.0	16.0	21.0	25.0	29.0	25.0	26.0
15	25.0	15.0	8.0	11.0	13.0	16.0	17.0	24.0	26.0	29.0	28.0	26.0
16	20.0	14.0	7.0	12.0	11.0	15.0	19.0	23.0	27.0	29.0	27.0	27.0
17	18.0	13.0	7.0	11.0	11.0	15.0	19.0	25.0	27.0	28.0	26.0	27.0
18	13.0	10.0	8.0	10.0	12.0	15.0	17.0	24.0	26.0	28.0	26.0	27.0
19	15.0	13.0	10.0	11.0	14.0	16.0	17.0	24.0	26.0	28.0	26.0	27.0
20	18.0	15.0	---	11.0	15.0	17.0	17.0	22.0	27.0	28.0	26.0	25.0
21	21.0	15.0	9.0	10.0	15.0	17.0	19.0	22.0	27.0	28.0	28.0	24.0
22	23.0	---	10.0	11.0	15.0	16.0	20.0	21.0	25.0	28.0	28.0	25.0
23	24.0	15.0	11.0	12.0	14.0	17.0	20.0	22.0	26.0	28.0	28.0	25.0
24	21.0	14.0	---	11.0	14.0	17.0	21.0	23.0	25.0	29.0	28.0	24.0
25	---	---	11.0	---	14.0	16.0	20.0	23.0	---	29.0	28.0	24.0
26	14.0	---	11.0	---	14.0	15.0	20.0	23.0	26.0	29.0	28.0	24.0
27	14.0	---	11.0	---	15.0	15.0	---	24.0	25.0	30.0	23.0	24.0
28	14.0	---	---	---	15.0	15.0	20.0	24.0	27.0	30.0	24.0	24.0
29	13.0	---	---	---	---	14.0	21.0	25.0	27.0	30.0	26.0	24.0
30	14.0	---	---	---	---	15.0	21.0	24.0	27.0	30.0	28.0	25.0
31	---	---	---	---	---	15.0	---	26.0	---	31.0	28.0	---
AVG	20.5	---	---	---	12.5	15.5	19.0	22.5	26.0	28.5	27.5	26.0

YEARLY AVERAGE = 20.0

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER			NOVEMBER			DECEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	2550	16500	114000	34	590	54	23	45	2.8
2	300	5500	4460	32	400	35	23	30	1.9
3	100	1750	473	30	385	31	21	55	3.1
4	68	1050	193	32	420	36	30	391	32
5	57	390	60	33	240	21	61	424	70
6	50	260	35	32	170	15	87	246	58
7	37	160	16	31	220	18	86	234	54
8	39	180	19	31	120	10	100	467	126
9	39	350	37	30	68	5.5	100	460	124
10	30	190	15	28	88	6.7	100	430	116
11	37	150	15	27	89	6.5	100	300	81
12	36	270	26	26	78	5.5	100	201	54
13	36	190	18	26	52	3.7	100	193	52
14	32	110	9.5	24	36	2.3	150	1040	421
15	28	100	7.6	23	88	5.5	150	1010	409
16	24	105	6.8	26	113	7.9	150	529	214
17	444	3550	10800	68	3400	911	150	533	216
18	1300	8910	33100	48	2200	285	250	495	334
19	344	2050	2250	25	350	24	200	637	344
20	80	2550	551	25	135	9.1	200	700	378
21	58	150	23	25	90	6.1	350	1040	983
22	50	80	11	25	80	5.4	250	757	511
23	43	71	8.2	24	73	4.7	250	922	622
24	39	47	4.9	24	77	5.0	250	970	655
25	42	81	9.2	24	70	4.5	200	982	530
26	39	96	10	24	66	4.3	300	459	372
27	37	66	6.6	24	72	4.7	300	1110	899
28	34	54	5.0	24	63	4.1	250	1150	776
29	36	700	68	24	146	9.5	250	1000	675
30	39	4600	484	23	41	2.5	250	884	597
31	36	1900	185	--	--	--	250	399	269
TOTAL	6084	--	167006.8	872	--	1543.5	5081	--	9979.8

	JANUARY			FEBRUARY			MARCH		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	150	175	71	209	405	229	458	1240	1530
2	150	207	84	211	675	385	462	1510	1880
3	140	300	113	184	460	229	478	1310	1690
4	133	348	125	170	392	180	470	1330	1690
5	131	235	83	176	475	226	446	870	1050
6	125	196	66	200	245	132	439	1050	1240
7	120	204	66	209	190	107	450	1120	1360
8	118	189	60	211	445	254	486	1190	1560
9	114	168	52	216	470	274	522	1450	2040
10	111	120	36	218	480	283	534	1370	1980
11	127	305	105	216	471	275	578	1280	2000
12	144	420	163	226	573	350	586	1440	2280
13	144	271	105	231	585	365	590	1250	1990
14	131	206	73	231	595	371	594	1280	2050
15	148	366	146	251	625	424	578	1150	1790
16	162	495	217	274	860	636	578	1170	1830
17	168	520	236	268	860	622	582	1140	1790
18	170	350	161	268	770	557	542	930	1360
19	178	299	144	257	590	409	498	700	941
20	182	259	127	236	595	379	494	400	534
21	178	270	130	244	572	377	514	750	1040
22	184	301	150	251	570	386	502	1070	1450
23	191	320	165	300	1000	810	482	830	1080
24	195	343	181	325	1140	1000	458	830	1030
25	204	355	196	331	1010	903	436	610	718
26	206	355	197	334	750	676	432	650	758
27	206	331	184	375	870	881	425	530	608
28	209	251	142	389	1150	1210	385	610	634
29	211	290	165	421	1260	1430	331	580	518
30	211	195	111	--	--	--	297	490	393
31	211	179	102	--	--	--	282	410	312
TOTAL	5052	--	3956	7432	--	14360	14909	--	41126

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

SUSPENDED-SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	APRIL			MAY			JUNE		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	265	310	222	334	380	343	297	350	281
2	244	280	184	344	430	399	282	250	190
3	238	340	218	341	360	331	282	230	175
4	241	300	195	329	310	275	282	280	213
5	262	400	283	322	325	283	294	390	310
6	274	330	244	297	210	168	297	470	377
7	288	470	365	285	85	65	326	1780	2170
8	294	530	421	279	145	109	400	24300	26200
9	294	450	357	271	230	168	350	11300	10700
10	303	420	344	268	225	163	300	3300	2670
11	312	450	379	271	205	150	290	4500	3520
12	309	370	309	279	235	177	280	2300	1740
13	318	410	352	276	255	190	290	5000	3920
14	338	350	319	265	250	179	330	44000	39200
15	338	300	274	265	320	229	300	17500	14200
16	341	370	341	274	310	229	280	4300	3250
17	341	370	341	282	190	145	280	1600	1210
18	344	290	269	282	230	175	300	710	575
19	331	250	223	282	310	236	320	520	449
20	322	270	235	297	350	281	320	500	432
21	300	230	186	309	320	267	330	470	419
22	288	300	233	312	330	278	360	1060	1030
23	291	310	244	318	305	262	450	940	1140
24	292	245	193	312	250	211	400	1770	1910
25	294	260	206	271	240	176	350	1450	1370
26	322	370	322	271	225	165	340	730	670
27	331	360	322	268	240	174	340	460	422
28	338	335	306	271	230	168	340	500	459
29	334	290	262	271	225	165	340	530	487
30	331	340	304	271	225	165	380	530	544
31	--	--	--	322	291	253	--	--	--
TOTAL	9123	--	8456	9039	--	6579	9730	--	120233

	JULY			AUGUST			SEPTEMBER		
DAY	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCEN-TRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
1	380	460	472	375	1700	1720	75	22000	4460
2	380	370	380	414	1140	1270	90	11000	2670
3	380	390	400	443	760	909	700	38000	71800
4	380	550	564	432	600	700	300	10000	8100
5	375	720	729	454	794	974	200	25000	13500
6	400	840	907	441	840	1000	128	15000	5180
7	439	860	1020	421	1390	1580	127	3000	1030
8	482	940	1220	433	17600	20600	106	3900	1120
9	494	860	1150	382	10400	10700	266	63200	51500
10	494	750	1000	407	7100	7800	117	28000	8850
11	510	1030	1420	392	3700	3920	620	45100	91800
12	506	810	1110	447	7160	12400	143	37600	15000
13	486	660	866	1520	51000	222000	104	19000	5340
14	494	530	707	537	44500	64500	106	33700	10100
15	486	570	748	182	23000	11300	128	39000	13500
16	554	4630	7790	143	7700	2970	90	15000	3650
17	583	10700	20200	269	4000	2910	80	2500	540
18	751	29000	58800	318	2110	1810	70	5700	1080
19	395	9760	10400	303	1450	1190	80	5600	1210
20	257	14600	10100	268	1070	774	93	3540	889
21	260	6800	4770	257	900	625	91	1650	405
22	361	3000	2920	251	860	583	89	870	209
23	410	7200	7970	257	860	597	89	780	187
24	361	3300	3220	241	630	410	90	720	175
25	439	3700	4390	246	670	445	90	700	170
26	474	16400	20900	262	670	474	91	670	165
27	385	6600	6860	1600	46200	346000	91	620	152
28	396	8100	8660	1020	53300	178000	91	590	145
29	371	5400	5410	222	30500	19400	91	570	140
30	474	22500	28800	95	16000	4100	82	470	104
31	396	12500	13400	108	38200	13300	--	--	--
TOTAL	13533	--	227283	13140	--	934961	4518	--	313171

TOTAL DISCHARGE FOR YEAR (CFS-DAYS)	98572
TOTAL SUSPENDED-SEDIMENT DISCHARGE FOR YEAR (TONS)	1849155.1

09474000 GILA RIVER AT KELVIN, ARIZ.--Continued

PARTICLE-SIZE DISTRIBUTION OF SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972
(ANALYSES MADE IN DISTILLED WATER)

DATE	TIME	TEMPER-ATURE (DEG C)	DIS-CHARGE (CFS)	SUS-PENDED SEDI-MENT (MG/L)	SUS-PENDED SEDI-MENT DIS-CHARGE (T/DAY)	SUS. SED. FALL DIAM. % FINER THAN .002 MM	SUS. SED. FALL DIAM. % FINER THAN .004 MM	SUS. SED. FALL DIAM. % FINER THAN .016 MM	SUS. SED. FALL DIAM. % FINER THAN .062 MM	SUS. SED. FALL DIAM. % FINER THAN .250 MM	SUS. SED. FALL DIAM. % FINER THAN .500 MM
JUNE											
17...	1400	25.0	330	52700	47000	47	65	94	99	--	--
JULY											
16...	1700	29.0	815	15800	34800	34	48	83	94	99	100
30...	1800	30.0	407	28100	30900	46	59	89	98	100	--

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ.
(Irrigation network station)

LOCATION.--Lat 33°33'59", long 111°32'08", in sec. 33, T. 3 N., R. 8 E. (unsurveyed), Maricopa County, at Stewart Mountain Dam, 3.5 miles upstream from gaging station, and 9.5 miles upstream from Verde River.

DRAINAGE AREA.--6,232 sq mi, at gaging station, of which 21 sq mi is downstream from Stewart Mountain Dam.

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1972.
Water temperatures: December 1950 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 1,450 micromhos Aug. 25; minimum daily, 1,350 micromhos July 1.
Water temperatures: Maximum, 24.0°C on several days during October; minimum, 12.0°C on many days during March and April.

Period of record:
Specific conductance: Maximum daily, 2,490 micromhos Aug. 20, 1951; minimum daily, 620 micromhos Mar. 28, 1953.
Water temperatures: Maximum, 29.0°C Aug. 24, 26, 27, 1951, Sept. 11, 12, 1969; minimum, 9.5°C Feb. 14, 1951.

REMARKS.--No inflow between sampling point and gaging station except during periods of heavy local rains. No flow at sampling point Oct. 18 to Mar. 13.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 15...	0800	183	17	10	53	17	200	6.6	173	0	68	310
MAR. 15...	0700	1000	17	0	59	16	190	6.3	180	0	74	310
APR. 15...	0700	1150	17	10	57	16	200	8.3	173	0	34	320
MAY 15...	0700	1225	15	110	44	16	190	6.0	163	0	45	310
JUNE 15...	0700	1770	15	20	53	16	190	5.7	165	0	68	310
JULY 15...	0730	1625	15	10	56	16	190	6.2	165	0	71	300
AUG. 15...	0730	850	15	20	55	16	200	5.4	166	4	66	310
SEP 15...	0730	1000	15	20	54	16	190	5.8	168	0	68	310

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT. 15...	.4	.36	.15	140	--	759	1.03	200	60	6.1	1380	8.2
MAR. 15	.4	.18	.00	140	--	762	1.04	210	66	5.7	1400	8.0
APR. 15...	.5	.25	.00	140	--	739	1.01	210	66	6.0	1410	8.2
MAY 15...	.4	.35	.06	150	--	708	.96	180	42	6.2	1380	7.7
JUNE 15...	.4	.59	.00	130	--	742	1.01	200	63	5.9	1390	7.4
JULY 15...	.3	.07	.03	130	--	736	1.00	210	70	5.8	1360	7.6
AUG. 15...	.4	.06	.03	120	764	754	1.04	200	60	6.1	1380	8.4
SEP 15...	.4	.04	.03	150	788	742	1.07	200	63	5.8	1380	7.7

09502000 SALT RIVER BELOW STEWART MOUNTAIN DAM, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1400	---	---	---	---	---	1420	1430	1380	1350	1400	1380
2	1370	---	---	---	---	---	1420	1410	1380	1400	1400	1380
3	1370	---	---	---	---	---	1420	1420	1380	1400	1400	1380
4	1380	---	---	---	---	---	1420	1430	1380	1370	1420	1380
5	1380	---	---	---	---	---	1420	1420	1380	1400	1400	1380
6	1380	---	---	---	---	---	1420	1400	1380	1400	1380	1380
7	1400	---	---	---	---	---	1420	1410	1380	1400	1400	1390
8	1400	---	---	---	---	---	1420	1410	---	1370	1390	1390
9	1400	---	---	---	---	---	1420	1400	1380	1380	1400	1390
10	1390	---	---	---	---	---	1420	1400	1370	1390	1400	1390
11	1400	---	---	---	---	---	1420	1400	1370	1390	1400	1390
12	1390	---	---	---	---	---	1420	1400	1380	1390	1380	1390
13	1400	---	---	---	---	---	1420	1400	1380	1390	1400	1390
14	1400	---	---	---	---	1420	1420	1400	1380	1400	1400	1390
15	1390	---	---	---	---	1430	1420	1400	1380	1390	1400	1390
16	1380	---	---	---	---	1430	1420	1400	1380	1390	1400	1390
17	1400	---	---	---	---	1430	1400	1400	1370	1390	1400	1390
18	---	---	---	---	---	1430	1400	1400	1370	1380	1400	1390
19	---	---	---	---	---	1430	1390	1400	1380	1390	1430	1410
20	---	---	---	---	---	1440	1390	1400	1380	1400	1430	1400
21	---	---	---	---	---	1420	1380	1400	1380	1400	1440	1420
22	---	---	---	---	---	1420	1380	1400	1380	1390	1400	1420
23	---	---	---	---	---	1420	1380	1400	1380	1420	1430	1400
24	---	---	---	---	---	1420	1380	1400	1380	1420	1440	1400
25	---	---	---	---	---	1420	1380	1400	1380	1420	1450	1400
26	---	---	---	---	---	1420	1380	1400	1380	1420	1410	1400
27	---	---	---	---	---	1420	1380	1420	1380	1380	1410	1400
28	---	---	---	---	---	1430	1380	1410	1380	1390	1410	1400
29	---	---	---	---	---	1430	1400	1400	1380	1390	1420	1400
30	---	---	---	---	---	1430	1390	1400	1380	1380	1420	1400
31	---	---	---	---	---	1440	---	1400	---	1390	1410	---
AVG	---	---	---	---	---	---	1400	1410	1380	1390	1410	1390

YEARLY AVERAGE = 1400

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24.0	---	---	---	---	---	12.0	14.0	17.0	17.0	19.0	20.0
2	24.0	---	---	---	--	---	12.0	14.0	17.0	17.0	19.0	20.0
3	24.0	---	---	---	---	---	12.0	14.0	15.0	17.0	19.0	20.0
4	24.0	---	---	---	---	---	13.0	14.0	15.0	17.0	19.0	20.0
5	24.0	---	---	---	---	---	13.0	14.0	16.0	17.0	19.0	20.0
6	24.0	---	---	---	---	---	13.0	14.0	15.0	17.0	19.0	20.0
7	24.0	---	---	---	---	---	13.0	14.0	15.0	17.0	19.0	20.0
8	24.0	---	---	---	---	---	13.0	12.0	---	17.0	19.0	20.0
9	24.0	---	---	---	---	---	13.0	14.0	15.0	18.0	19.0	20.0
10	24.0	---	---	---	---	---	13.0	14.0	15.0	18.0	19.0	20.0
11	24.0	---	---	---	---	---	13.0	14.0	16.0	18.0	19.0	20.0
12	24.0	---	---	---	---	---	14.0	14.0	16.0	18.0	19.0	20.0
13	24.0	---	---	---	---	---	14.0	14.0	16.0	18.0	19.0	20.0
14	24.0	---	---	---	---	12.0	14.0	14.0	16.0	18.0	19.0	20.0
15	24.0	---	---	---	---	12.0	14.0	14.0	16.0	17.0	19.0	20.0
16	23.0	---	---	---	---	12.0	14.0	14.0	16.0	17.0	19.0	20.0
17	---	---	---	---	---	12.0	14.0	15.0	16.0	17.0	19.0	20.0
18	---	---	---	---	---	12.0	14.0	15.0	16.0	17.0	19.0	21.0
19	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	19.0	20.0
20	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	21.0
21	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	21.0
22	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	21.0
23	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	21.0
24	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	21.0
25	---	---	---	---	---	12.0	14.0	15.0	16.0	18.0	20.0	20.0
26	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	20.0	20.0
27	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	20.0	20.0
28	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	20.0	20.0
29	---	---	---	---	---	12.0	14.0	15.0	17.0	18.0	20.0	20.0
30	---	---	---	---	---	12.0	14.0	16.0	17.0	18.0	20.0	20.0
31	---	---	---	---	---	12.0	---	16.0	---	19.0	20.0	---
AVG	---	---	---	---	---	---	13.5	14.5	16.0	17.5	19.5	20.0

YEARLY AVERAGE = 17.0

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ.
(Hydrologic bench-mark station)

LOCATION.--Lat 34°09'39", long 111°41'32", in sec. 36, T. 9½ N., R. 6 E. (unsurveyed), Gila County, at gaging station, 1.4 miles upstream from mouth, and 13 miles south of town of Childs.

DRAINAGE AREA.--37 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: August 1968 to September 1972.
Sediment records: August 1968 to September 1972.

REMARKS.--No flow Apr. 30 to Sept. 30.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
13...	0945	.50	42	20	48	13	36	1.4	263	0	1.8	15
DEC.												
15...	1030	.50	35	10	33	9.8	27	1.2	192	0	12	9.8
JAN.												
14...	1100	1.3	26	10	20	5.5	13	1.1	99	0	14	6.1
FEB.												
25...	1045	.62	34	20	33	9.3	22	2.0	178	0	11	9.0
APR.												
12...	1015	.09	34	30	42	12	27	1.6	231	0	8.6	11

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.												
13...	2.1	.03	.06	50	289	.39	170	0	1.2	459	7.8	22.0
DEC.												
15...	2.7	.00	.03	30	225	.31	120	0	1.1	344	7.9	7.0
JAN.												
14...	1.4	.04	.00	30	136	.19	73	0	.7	197	7.9	7.0
FEB.												
25...	2.0	.00	.00	30	210	.29	120	0	.9	321	7.9	12.0
APR.												
12...	1.9	.00	.00	40	252	.34	150	0	.9	395	7.6	12.0

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ. --Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 13...	0945	.50	470	--	21.0	--	8.0
NOV. 15...	1230	.70	225	7.0	15.0	--	8.0
DEC. 15...	1030	.54	355	--	7.0	8.5	8.0
JAN. 14...	1110	1.4	200	7.0	7.0	--	8.0
FEB. 25...	1045	.62	340	--	12.0	--	10.0
APR. 17...	1015	.09	405	--	12.0	--	10.0

RADIOCHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED GROSS ALPHA AS U-NAT. (PC/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (PC/L)	DIS-SOLVED GROSS ALPHA AS U-NAT. (UG/L)	SUS-PENDED GROSS ALPHA AS U-NAT. (UG/L)	DIS-SOLVED GROSS BETA AS CS-137 (PC/L)	SUS-PENDED GROSS BETA AS CS-137 (PC/L)
OCT. 13...	0945	.50	4.3	<.1	13	<.4	5.3	.5

DATE	DIS-SOLVED GROSS BETA AS SR90 /Y90 (PC/L)	SUS-PENDED GROSS BETA AS SR90 /Y90 (PC/L)	DIS-SOLVED RA-226 (RADON METHOD) (PC/L)	DIS-SOLVED NATURAL URANIUM (U) (UG/L)	TOTAL FILT-RABLE RESIDUE (MG/L)	TOTAL NON-FILT-RABLE RESIDUE (MG/L)	TEMPER-ATURE (DEG C)
OCT. 13...	4.2	.4	.04	1.9	290	<1	22.0

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-AZINON (UG/L)	DI-ELDRIN (UG/L)	ENDRIN (UG/L)
ANALYSIS OF ADDITIONAL SAMPLES										
NOV. 15...	1230	.70	.00	.0	.00	.00	.00	.00	.00	.00

DATE	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	MALA-THION (UG/L)	METHYL PARA-THION (UG/L)	PARA-THION (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
ANALYSIS OF ADDITIONAL SAMPLES									
NOV. 15...	.00	.00	.00	.00	.00	.00	.00	.00	.00

09508300 WET BOTTOM CREEK NEAR CHILDS, ARIZ.--Continued

PERIODIC DAILY SUSPENDED SEDIMENT, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	TEMPERATURE (DEG C)	DISCHARGE (CFS)	SUSPENDED SEDIMENT (MG/L)	SUSPENDED SEDIMENT DISCHARGE (T/DAY)
OCT.					
13...	0945	21.0	0.50	0	0
NOV.					
15...	1230	15.0	.70	0	0
DEC.					
15...	1030	7.0	.54	0	0
JAN.					
14...	1110	7.0	1.4	0	0
FEB.					
25...	1045	12.0	.62	0	0
APR.					
12...	1015	12.0	.09	5	0

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.

(Irrigation network station)

LOCATION (revised).--Lat 33°49'03", long 111°38'08", in SE¼ sec. 33, T.6 N, R.7 E. (unsurveyed), Maricopa County, at gaging station in Tonto National Forest, on right bank 1,300 ft downstream from Bartlett Dam, 5.9 miles upstream from Camp Creek, and 18 miles east of town of Cave Creek.

DRAINAGE AREA.--6,188 sq mi (at gaging station).

PERIOD OF RECORD.--Chemical analyses: December 1950 to September 1972.
Water temperatures: December 1950 to September 1972.

EXTREMES.--1971-72:
Specific conductance: Maximum daily, 645 micromhos Sept. 29, 30; minimum daily, 440 micromhos Jan. 21, 25, Feb. 3.
Water temperatures: Maximum, 26.0°C on many days during August and September; minimum, 7.0°C Feb. 2.

Period of record:
Specific conductance: Maximum daily, 958 micromhos Nov. 10, 1956; minimum daily, 225 micromhos May 14, 1965.
Water temperatures: Maximum, 32.0°C July 18, Aug. 14, 1951; minimum, 5.0°C Jan. 30, 1952.

REMARKS.--No inflow between sampling point and gaging station except during periods of heavy local rains.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 15...	0700	500	16	20	42	33	39	4.6	257	0	73	22
NOV. 15...	0800	289	18	0	45	31	37	3.9	240	14	65	24
DEC. 15...	0800	500	18	20	46	35	37	3.1	292	0	77	23
JAN. 15...	0800	72	16	--	41	23	25	3.1	225	0	60	16
FEB. 15...	0800	750	18	20	42	23	23	2.7	234	0	40	16
MAR. 15...	0800	500	17	10	39	23	23	2.5	220	0	55	15
APR. 15...	0800	60	17	20	42	24	23	3.6	229	0	47	17
MAY 15...	0800	43	17	70	43	25	24	2.7	242	0	48	16
JUNE 15...	0800	80	18	20	44	27	28	2.7	250	0	48	17
AUG. 15...	0800	380	19	20	39	31	38	3.4	253	0	74	24
SEP. 15...	0800	400	21	20	42	34	39	4.5	259	0	81	25

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHO PHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)
OCT. 15...	.3	.29	.09	200	--	358	.49	240	30	1.1	597	8.3
NOV. 15...	.4	.10	.03	200	--	357	.49	240	20	1.0	589	8.4
DEC. 15...	.4	.13	.03	180	--	384	.52	260	19	1.0	607	7.5
JAN. 15...	.3	.18	.06	150	--	296	.40	200	13	.8	466	8.2
FEB. 15...	.4	.21	.06	130	--	281	.38	200	8	.7	482	8.0
MAR. 15...	.0	.17	.06	140	--	284	.39	190	12	.7	447	8.1
APR. 15...	.2	.14	.03	140	--	287	.39	200	16	.7	467	8.2
MAY 15...	.3	.07	.03	150	--	296	.40	210	12	.7	495	7.9
JUNE 15...	.4	.09	.03	180	--	309	.42	220	16	.8	531	7.5
AUG. 15...	.4	.26	.15	190	360	355	.49	220	17	1.1	597	7.8
SEP. 15...	.5	.25	.09	200	402	376	.55	240	32	1.1	620	8.0

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	560	600	630	590	470	470	475	495	520	550	590	590
2	580	585	625	605	475	465	475	500	520	550	590	600
3	565	575	630	590	440	470	470	500	520	550	590	605
4	565	610	630	605	455	465	480	510	520	550	590	610
5	570	600	630	595	455	470	480	510	520	550	600	610
6	550	600	630	590	460	465	475	505	525	555	595	610
7	625	580	625	585	450	470	480	505	520	550	590	615
8	625	600	630	590	450	465	480	510	520	550	595	615
9	625	580	630	585	450	470	480	510	520	555	595	620
10	625	600	610	590	480	470	480	510	520	555	600	620
11	630	590	630	585	480	470	480	505	520	560	600	625
12	625	585	625	590	480	465	480	510	520	560	600	625
13	630	600	630	470	480	465	480	510	530	560	605	620
14	615	600	625	450	480	465	480	510	530	560	610	625
15	615	600	630	475	475	465	480	510	535	565	610	625
16	595	595	630	470	455	460	485	510	535	570	610	630
17	595	570	630	475	465	460	480	510	535	565	610	630
18	595	610	630	490	475	465	480	520	535	565	610	630
19	600	615	630	490	470	465	480	520	535	570	610	630
20	590	600	630	585	470	465	485	520	540	570	615	630
21	620	615	630	440	470	460	485	520	545	570	615	630
22	630	620	630	445	470	465	480	520	540	570	615	630
23	630	620	630	445	470	470	480	520	---	575	615	635
24	635	610	630	445	460	470	485	520	540	575	620	635
25	635	600	630	440	460	470	485	520	540	570	620	640
26	630	590	630	445	460	470	485	520	540	575	615	640
27	630	595	630	460	460	475	485	520	540	570	615	640
28	620	595	625	470	460	470	485	520	540	580	615	640
29	620	580	625	475	460	475	490	520	545	580	615	645
30	620	585	630	470	---	470	490	520	545	580	610	645
31	620	---	630	460	---	460	---	520	---	580	615	---
AVG	609	597	628	516	465	467	481	513	531	564	606	625

YEARLY AVERAGE = 551

09510000 VERDE RIVER BELOW BARTLETT DAM, ARIZ.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23.0	20.0	13.0	9.0	8.0	9.0	10.0	12.0	15.0	16.0	21.0	26.0
2	23.0	21.0	13.0	9.0	7.0	9.0	10.0	12.0	15.0	16.0	21.0	25.0
3	24.0	22.0	13.0	9.0	8.0	9.0	12.0	13.0	14.0	16.0	20.0	26.0
4	23.0	22.0	13.0	9.0	9.0	10.0	11.0	13.0	14.0	16.0	20.0	26.0
5	23.0	22.0	12.0	9.0	9.0	10.0	12.0	13.0	14.0	17.0	20.0	26.0
6	23.0	22.0	12.0	10.0	9.0	10.0	11.0	13.0	14.0	16.0	20.0	26.0
7	21.0	20.0	12.0	9.0	9.0	10.0	11.0	13.0	13.0	16.0	20.0	26.0
8	21.0	20.0	12.0	9.0	9.0	10.0	11.0	13.0	14.0	16.0	20.0	26.0
9	21.0	18.0	12.0	10.0	9.0	10.0	11.0	13.0	14.0	16.0	21.0	26.0
10	22.0	16.0	11.0	10.0	8.0	10.0	11.0	13.0	15.0	16.0	23.0	26.0
11	22.0	15.0	12.0	9.0	8.0	9.0	11.0	13.0	16.0	16.0	24.0	26.0
12	22.0	15.0	12.0	9.0	8.0	10.0	11.0	13.0	16.0	16.0	24.0	26.0
13	22.0	14.0	13.0	8.0	8.0	10.0	11.0	13.0	15.0	17.0	24.0	26.0
14	22.0	14.0	13.0	8.0	8.0	9.0	11.0	13.0	15.0	17.0	24.0	26.0
15	22.0	13.0	10.0	8.0	8.0	9.0	11.0	13.0	15.0	17.0	24.0	26.0
16	22.0	13.0	10.0	8.0	8.0	9.0	10.0	13.0	15.0	17.0	24.0	26.0
17	23.0	14.0	10.0	8.0	9.0	10.0	10.0	13.0	15.0	17.0	24.0	26.0
18	23.0	14.0	10.0	8.0	8.0	10.0	11.0	13.0	15.0	16.0	23.0	26.0
19	24.0	14.0	10.0	8.0	8.0	10.0	11.0	14.0	15.0	17.0	23.0	26.0
20	22.0	14.0	10.0	8.0	9.0	9.0	11.0	14.0	15.0	17.0	23.0	26.0
21	20.0	15.0	10.0	9.0	9.0	10.0	12.0	14.0	16.0	17.0	24.0	25.0
22	19.0	14.0	10.0	8.0	8.0	9.0	11.0	14.0	14.0	17.0	24.0	25.0
23	19.0	15.0	10.0	9.0	9.0	11.0	11.0	14.0	---	17.0	24.0	25.0
24	19.0	14.0	9.0	9.0	8.0	11.0	12.0	14.0	15.0	17.0	26.0	25.0
25	19.0	14.0	10.0	10.0	8.0	10.0	12.0	14.0	15.0	17.0	25.0	24.0
26	18.0	13.0	10.0	9.0	8.0	10.0	12.0	14.0	15.0	18.0	25.0	24.0
27	18.0	14.0	9.0	8.0	9.0	10.0	12.0	14.0	15.0	19.0	25.0	24.0
28	20.0	13.0	9.0	8.0	9.0	10.0	12.0	14.0	15.0	20.0	25.0	24.0
29	21.0	14.0	10.0	8.0	9.0	10.0	12.0	14.0	16.0	20.0	25.0	24.0
30	20.0	14.0	9.0	8.0	---	10.0	13.0	14.0	16.0	20.0	26.0	24.0
31	20.0	---	9.0	8.0	---	9.0	---	14.0	---	20.0	26.0	---
AVG	21.5	16.0	11.0	8.5	8.5	9.5	11.0	13.5	15.0	17.0	23.0	25.5

YEARLY AVERAGE = 15.0

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'45", long 114°33'09", in SW¼SE¼ sec.19, T.8 S., R.22 W., Yuma County, 0.5 mile upstream from mouth, and 5 miles east of Yuma.

DRAINAGE AREA.--58,000 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)
OCT.								
06...	1410	85	26	10	160	64	440	--
20...	--	--	21	--	153	60	--	446
NOV.								
03...	1320	73	26	--	150	57	470	--
17...	--	--	21	--	143	69	--	449
DEC.								
08...	1350	74	26	0	150	60	490	--
22...	--	--	21	--	177	73	--	534
JAN.								
05...	1445	102	25	10	150	62	450	--
19...	--	--	21	--	148	66	--	440
FEB.								
03...	1345	60	28	0	170	63	480	--
16...	--	--	22	--	159	81	--	532
MAR.								
09...	1300	140	28	10	190	75	590	--
22...	--	--	22	--	188	80	--	571
APR.								
05...	1340	142	27	0	200	73	560	--
19...	--	--	21	--	190	79	--	582
MAY								
03...	1305	29	25	10	170	68	480	--
17...	--	--	20	--	161	62	--	453
JUNE								
07...	1345	28	25	10	160	60	450	--
21...	--	--	19	--	139	57	--	447
JULY								
06...	1305	122	26	10	180	73	630	--
19...	--	--	21	--	172	80	--	583
AUG.								
02...	1400	130	28	10	180	70	580	--
17...	--	--	20	--	179	74	--	593
SEP.								
06...	1350	133	25	20	170	72	540	--
20...	--	--	22	--	171	76	--	577

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT.									
06...	6.3	309	0	530	640	.7	.92	680	2060
20...	--	288	--	470	620	--	--	--	1990
NOV.									
03...	6.9	295	0	500	650	.9	1.0	720	2020
17...	--	292	--	470	630	--	--	--	1990
DEC.									
08...	6.2	315	0	500	610	.9	.87	670	1950
22...	--	272	--	420	880	--	--	--	2320
JAN.									
05...	9.4	285	--	430	720	.9	.44	640	2040
19...	--	282	--	445	640	--	--	--	1940
FEB.									
03...	6.9	298	0	440	770	.9	.56	750	2140
16...	--	304	--	490	800	--	--	--	2320
MAR.									
09...	8.2	326	0	520	900	.9	.82	740	2430
22...	--	320	--	490	900	--	--	--	2470
APR.									
05...	7.9	318	0	510	870	.8	.71	760	2410
19...	--	320	--	500	910	--	--	--	2540
MAY									
03...	7.2	298	0	540	640	.9	.58	700	2110
17...	--	296	--	490	630	--	--	--	2090
JUNE									
07...	6.9	296	0	530	620	1.2	.58	750	2030
21...	--	286	--	520	550	--	--	--	1960
JULY									
06...	7.4	315	0	580	880	1.0	1.1	840	2540
19...	--	316	--	520	870	--	--	--	2530
AUG.									
02...	6.9	312	0	540	840	.9	.98	900	2470
17...	--	324	--	540	860	--	--	--	2480
SEP.									
06...	7.5	308	0	500	840	.9	.86	800	2310
20...	--	312	--	540	835	--	--	--	2440

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
06...	2020	2.80	660	410	7.4	3250	7.9	25.5
20...	1910	2.71	630	394	7.7	3140	7.9	--
NOV.								
03...	2010	2.75	610	370	8.3	3180	7.8	22.0
17...	1930	2.71	640	400	7.7	3200	8.0	--
DEC.								
08...	2000	2.65	620	360	8.6	3140	7.9	19.5
22...	2240	3.16	740	517	8.5	3790	8.0	--
JAN.								
05...	1990	2.77	630	400	7.8	3270	7.9	19.0
19...	1900	2.64	640	409	7.6	3150	8.1	--
FEB.								
03...	2110	2.91	680	440	8.0	3390	7.8	21.0
16...	2240	3.16	730	480	8.6	3710	7.9	--
MAR.								
09...	2480	3.30	780	520	9.2	3890	7.9	25.5
22...	2410	3.36	800	538	8.8	3990	7.9	--
APR.								
05...	2410	3.28	800	540	8.6	3900	7.9	25.5
19...	2440	3.45	800	538	9.0	4030	7.9	--
MAY								
03...	2080	2.87	700	460	7.9	3300	7.8	28.0
17...	1960	2.84	655	412	7.7	3270	8.0	--
JUNE								
07...	2000	2.76	650	400	7.7	3220	7.0	28.0
21...	1880	2.67	580	346	8.1	3040	--	--
JULY								
06...	2540	3.45	750	490	10	3990	7.9	27.0
19...	2400	3.44	760	501	9.2	3940	7.9	--
AUG.								
02...	2400	3.36	740	480	9.3	3910	8.1	28.0
17...	2430	3.37	750	484	9.4	3910	7.9	--
SEP.								
06...	2310	3.14	720	470	8.8	3810	8.0	26.0
20...	2380	3.32	740	484	9.2	3870	7.9	--

09520700 GILA RIVER NEAR MOUTH, NEAR YUMA, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS- CHARGE (CFS)	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)	AIR TEMP- ERATURE (DEG C)	DIS- SOLVED OXYGEN (MG/L)
OCT.							
15...	1255	65	3000	8.0	25.0	28.0	8.5
NOV.							
18...	1055	70	3020	7.7	20.5	13.0	9.1
DEC.							
16...	1040	65	3750	7.7	19.0	11.0	8.7
JAN.							
21...	1430	E100	3250	7.6	22.0	19.0	9.4
FEB.							
17...	1030	115	3500	7.6	21.0	19.0	8.7
MAR.							
16...	1045	140	4000	7.7	22.0	26.0	7.7
APR.							
20...	1340	127	3300	7.8	25.0	21.0	7.1
MAY							
18...	1045	30	2520	7.8	25.0	28.0	9.5
JUNE							
22...	1125	55	2900	7.9	27.0	33.0	9.0
JULY							
20...	1410	130	3500	7.9	28.0	40.0	7.4

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.

LOCATION.--Lat 32°43'07", long 114°43'05", in NE¼SE¼ sec. 21, T. 8 S., R. 24 W., Gila and Salt River meridian, Yuma County, Ariz., at northerly international boundary, 0.5 mile east of Andrade, 1.1 miles upstream from Morelos Dam, 1.1 miles downstream from Rockwood Gate, 20.7 miles upstream from southerly international boundary, and 21 miles downstream from Laguna Dam.

DRAINAGE AREA.--243,000 sq mi, approximately.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)	BICAR-BONATE (HCO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)
OCT.								
04...	--	--	14	111	41	207	214	410
12...	--	--	13	119	45	229	222	420
18...	--	--	13	118	43	215	218	415
26...	--	--	15	118	45	222	228	420
NOV.								
01...	--	--	14	117	43	210	226	400
08...	--	--	13	119	43	214	228	405
15...	--	--	13	119	45	218	232	410
22...	--	--	14	119	42	210	228	400
29...	--	--	13	118	44	213	232	405
DEC.								
06...	--	--	14	122	45	224	236	415
13...	--	--	12	114	49	247	216	425
20...	--	--	13	119	49	260	216	440
27...	--	--	12	120	46	257	228	435
JAN.								
03...	--	--	12	118	45	244	216	425
10...	--	--	10	100	40	158	192	360
17...	--	--	13	128	49	276	242	445
24...	--	--	13	116	44	210	228	400
31...	--	--	12	116	41	199	224	390
FEB.								
07...	--	--	13	114	45	211	230	400
14...	--	--	11	111	43	205	214	400
22...	--	--	12	116	46	235	218	415
28...	--	--	12	118	45	234	218	420
MAR.								
06...	--	--	10	118	45	236	216	420
13...	--	--	11	116	45	234	212	420
20...	--	--	11	115	47	226	212	415
27...	--	--	12	118	45	236	214	420
APR.								
03...	--	--	11	118	46	243	216	425
10...	--	--	12	114	48	229	212	420
17...	--	--	11	118	45	242	216	420
24...	--	--	11	117	43	229	212	425
MAY								
01...	--	--	12	119	43	222	222	415
08...	--	--	12	119	45	235	226	425
15...	--	--	12	122	44	240	228	425
22...	--	--	12	118	45	240	230	430
30...	--	--	12	116	44	237	224	425
JUNE								
05...	--	--	11	112	45	225	216	420
12...	--	--	12	114	45	232	220	425
19...	--	--	11	113	41	211	210	410
26...	--	--	11	108	41	200	206	405
JULY								
03...	0730	2360	9.0	104	37	168	194	360
10...	0730	2320	10	105	38	172	194	370
17...	0730	2460	10	102	40	176	196	370
24...	0730	2780	10	101	37	172	192	365
31...	0730	2780	11	100	38	176	188	370
AUG.								
07...	0730	2740	11	100	37	175	188	365
14...	0730	2740	11	102	38	178	190	370
21...	0730	2400	11	103	37	185	190	375
28...	0730	2210	11	103	37	190	194	375
SEP.								
05...	0730	1370	12	107	40	215	206	395
11...	0730	1350	13	111	40	219	204	395
18...	0730	1050	13	113	42	231	216	400
25...	0730	1060	14	113	40	233	214	400

09522000 COLORADO RiVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

EXTREMES.--1971-72:
Specific conductance: Maximum, 2,210 micromhos Jan. 17; minimum, 1,310 micromhos Oct. 1.

Period of record:
Specific conductance (1969-73): Maximum, 2,230 micromhos Dec. 9, 1969; minimum, 1,310 micromhos Oct. 1, 1971.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)
OCT.									
04...	208	1170	1100	1.59	445	270	4.3	1750	8.0
12...	255	1260	1190	1.71	480	298	4.5	1900	7.9
18...	232	1210	1140	1.65	470	291	4.3	1840	7.9
26...	240	1270	1170	1.73	480	293	4.4	1910	8.0
NOV.									
01...	230	1220	1130	1.66	470	284	4.2	1830	8.1
08...	235	1220	1140	1.66	475	288	4.3	1860	8.0
15...	240	1210	1160	1.65	480	290	2.0	1880	8.0
22...	230	1190	1130	1.62	470	283	4.2	1840	8.0
29...	232	1200	1140	1.63	475	285	4.2	1850	8.0
DEC.									
06...	250	1210	1190	1.65	490	296	4.4	1940	8.1
13...	285	1290	1240	1.75	485	308	4.9	2020	8.0
20...	305	1360	1290	1.85	500	323	5.1	2100	8.1
27...	290	1370	1270	1.86	490	303	5.1	2060	8.1
JAN.									
03...	278	1320	1230	1.80	480	303	4.8	2000	8.1
10...	160	1010	924	1.37	415	258	3.4	1520	8.1
17...	325	1430	1360	1.94	520	322	5.3	2210	8.0
24...	230	1170	1130	1.59	470	283	4.2	1820	8.0
31...	215	1130	1080	1.54	460	276	4.0	1760	8.0
FEB.									
07...	230	1180	1130	1.60	470	282	4.2	1820	8.0
14...	220	1150	1100	1.56	455	280	4.2	1770	8.1
22...	270	1260	1200	1.71	480	301	4.7	1960	8.1
28...	265	1270	1200	1.73	480	301	4.6	1950	8.1
MAR.									
06...	268	1220	1200	1.66	480	303	4.7	1950	8.1
13...	265	1260	1200	1.71	475	301	4.7	1940	8.1
20...	260	1240	1180	1.69	480	306	4.5	1920	8.0
27...	270	1260	1210	1.71	480	304	4.7	1950	8.1
APR.									
03...	280	1280	1230	1.74	485	308	4.8	1990	8.1
10...	260	1250	1190	1.70	480	306	4.5	1920	8.0
17...	278	1290	1220	1.75	480	303	4.8	1970	8.1
24...	250	1220	1180	1.66	470	296	4.6	1870	8.1
MAY									
01...	241	1210	1160	1.65	470	293	4.4	1860	8.1
08...	258	1290	1210	1.75	480	294	4.7	1930	8.1
15...	265	1300	1220	1.77	480	293	4.7	1960	8.1
22...	260	1290	1220	1.75	480	292	4.8	1950	8.0
30...	255	1250	1200	1.70	470	286	4.8	1910	8.0
JUNE									
05...	242	1240	1160	1.69	465	288	4.5	1870	8.0
12...	250	1230	1190	1.67	470	290	4.7	1900	8.1
19...	220	1150	1110	1.56	450	278	4.3	1780	8.1
26...	202	1100	1070	1.50	440	271	4.2	1700	8.0
JULY									
03...	171	966	946	1.31	410	251	3.6	1510	8.1
10...	178	1010	970	1.37	420	261	3.7	1550	8.0
17...	182	1020	978	1.39	420	260	3.7	1560	8.0
24...	172	966	953	1.31	405	248	3.7	1530	8.1
31...	177	1000	966	1.36	405	251	3.8	1540	8.1
AUG.									
07...	175	1010	957	1.37	400	246	3.8	1530	8.1
14...	182	1010	976	1.37	410	254	3.8	1560	8.1
21...	189	1020	995	1.39	410	254	4.0	1580	8.1
28...	194	1040	1010	1.41	410	251	4.1	1610	8.0
SEP.									
05...	225	1120	1100	1.52	430	261	4.5	1750	8.1
11...	240	1140	1120	1.55	440	272	4.5	1790	8.1
18...	258	1190	1160	1.62	455	278	4.7	1880	8.1
25...	255	1170	1160	1.59	445	270	4.8	1850	8.1

09522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
OCT.								
14...	0800	--	--	--	--	--	--	4200
15...	0750	700	1700	8.0	22.0	23.0	7.4	--
19...	0800	--	--	--	--	--	--	550
19...	1230	--	--	--	--	--	--	370
NOV.								
17...	0815	--	--	--	--	--	--	4400
18...	0815	679	1730	7.9	14.0	9.0	9.5	--
DEC.								
15...	0900	--	--	--	--	--	--	1800
16...	0820	2190	1780	8.0	12.0	2.0	11.2	--
JAN.								
20...	0830	--	--	--	--	--	--	100
21...	0810	757	1840	7.8	11.0	10.0	8.8	--
FEB.								
16...	0830	--	--	--	--	--	--	100
17...	0830	1960	1740	7.8	15.0	8.0	9.9	--
MAR.								
15...	0830	--	--	--	--	--	--	190
16...	0840	3260	1600	7.9	20.0	14.0	9.0	--
APR.								
19...	0815	--	--	--	--	--	--	250
20...	0835	3180	1550	7.9	18.0	14.0	9.3	--
MAY								
17...	0845	--	--	--	--	--	--	3000
18...	0815	1160	1570	7.8	22.0	19.5	7.6	--
JUNE								
21...	1000	--	--	--	--	--	--	1200
22...	0835	2400	1420	8.1	27.0	24.0	7.4	--
28...	1600	--	--	--	--	--	--	1000
JULY								
19...	0830	--	--	--	--	--	--	3400
20...	0810	2730	1390	8.0	27.0	31.5	7.4	--
SEP.								
12...	0730	--	--	--	--	--	--	130
13...	0830	1350	1740	7.8	24.5	27.0	7.4	--

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)
OCT.								
15...	0750	700	.00	.0	.00	.00	.00	.00
JAN.								
21...	0810	757	.00	.0	.00	.00	.00	.00
APR.								
20...	0835	3180	.00	.0	.00	.00	.00	.00
JULY								
20...	0810	2730	.00	.0	.00	.00	.00	.00
AUG.								
16...	0800	2670	.00	.0	.00	.00	.00	.00
SEP.								
13...	0830	1350	.00	.0	.00	.00	.00	.00

DATE	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
OCT.							
15...	.00	.00	.00	.00	2.7	.00	.00
JAN.							
21...	.00	.00	.00	.00	.00	.00	.00
APR.							
20...	.00	.00	.00	.00	.00	.00	.00
JULY							
20...	.00	.00	.00	.00	.00	.00	.00
AUG.							
16...	.00	.00	.00	.00	.00	.00	.00
SEP.							
13...	.00	.00	.00	.00	.00	.00	.00

00522000 COLORADO RIVER AT NORTHERLY INTERNATIONAL BOUNDARY, ABOVE MORELOS DAM, NEAR ANDRADE, CALIF.--Continued

SPECIFIC CONDUCTANCE (MICROMHOS AT 25°C), WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1310	1830	1890	1910	1770	1960	2000	1860	1880	1540	1530	1740
2	1480	1880	1890	1970	1810	1910	1920	1880	1990	1530	1520	1770
3	1670	1910	1870	2000	1860	1920	1990	1870	1850	1510	1520	1760
4	1750	1890	1880	1910	1810	1920	1920	1900	1900	1550	1510	1770
5	1830	1860	1890	1960	1770	1940	1950	1910	1870	1510	1510	1750
6	1860	1860	1940	1980	1800	1950	1910	1910	1860	1510	1490	1740
7	1870	1880	1930	1780	1820	1910	1940	1890	1820	1470	1530	1790
8	1870	1860	1930	1530	1730	1990	1850	1930	1850	1540	1510	1800
9	1870	1880	1980	1530	1950	2030	1890	1890	1840	1550	1540	1780
10	1890	1870	1960	1520	1830	1990	1920	1920	1850	1550	1510	1790
11	1880	1860	1870	1540	1760	1990	1920	1920	1900	1520	1540	1790
12	1900	1870	1800	1960	1770	1990	1890	1950	1900	1540	1550	1790
13	1860	1870	2020	1950	1790	1940	1930	1960	1830	1510	1540	1790
14	1850	1880	1920	2040	1770	1900	1920	1930	1840	1510	1560	1780
15	1850	1880	1950	2050	1790	1920	1940	1960	1830	1500	1540	1800
16	1820	1910	1960	2110	1870	1910	2050	1930	1780	1580	1540	1870
17	1860	1860	2010	2210	1830	1910	1970	1920	1770	1560	1530	1880
18	1840	1840	2090	1840	1840	1910	1980	1940	1780	1560	1530	1880
19	1840	1870	2070	1800	1860	1960	1930	1940	1780	1530	1530	1850
20	1840	1890	2100	1810	1890	1920	1900	1930	1760	1530	1580	1830
21	1790	1840	2000	1930	1880	1910	1930	1920	1740	1560	1580	1850
22	1800	1840	2080	1810	1960	1910	1830	1950	1710	1540	1590	1830
23	1850	1850	1980	1810	1910	1890	1900	1920	1690	1550	1560	1830
24	1860	1850	2000	1820	1910	1890	1870	1940	1740	1530	1580	1840
25	1870	1860	2000	1860	1990	1890	1910	1940	1710	1520	1580	1850
26	1910	1840	2070	1920	1970	1950	1910	1940	1700	1510	1570	1890
27	1890	1850	2060	1840	1980	1950	1890	1930	1510	1520	1610	1880
28	1850	1860	2020	1800	1950	2000	1840	1930	1540	1540	1610	1690
29	1840	1850	1930	1790	2040	1960	1810	1890	1530	1560	1640	1580
30	1820	1870	1930	1790	---	1960	1850	1910	1550	1560	1700	1610
31	1800	---	1970	1760	---	1990	---	1910	---	1540	1740	---
AVG	1810	1870	1970	1850	1860	1940	1920	1920	1780	1530	1560	1790

YEARLY AVERAGE = 1820

09522200 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ.

LOCATION.--Lat 32°29'48", long 114°48'48", at gaging station in Mexico, 0.2 mile upstream from southerly international boundary, 2 miles west of San Luis, Ariz., 19.4 miles downstream from Morelos Dam, and 20.5 miles downstream from northerly international boundary.

DRAINAGE AREA.--243,000 sq mi, approximately.

PERIOD OF RECORD.--October 1968 to September 1972.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1962-68 available from district office in Tucson, Ariz. No flow Mar. 22 to Apr. 2, Apr. 5-29, June 10-26.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
05...	1005	290	31	20	240	110	940	7.8	328	0	920	1400
NOV.												
02...	1030	240	30	0	260	110	1100	9.4	295	0	1100	1600
DEC.												
07...	1000	268	30	0	250	110	1100	9.2	354	0	1000	1500
JAN.												
04...	0940	98	29	0	240	100	980	11	333	--	950	1200
FEB.												
01...	1145	246	30	20	260	110	1100	9.5	256	0	1100	1500
MAR.												
07...	1125	66	22	10	190	74	630	8.4	300	0	760	810
APR.												
04...	1050	4.6	14	10	140	49	200	5.9	245	0	420	260
MAY												
02...	1050	54	25	10	190	90	710	8.7	314	0	830	890
JUNE												
06...	1055	27	18	20	140	58	310	7.1	228	0	520	380
JULY												
05...	1205	160	27	10	220	91	920	8.9	354	0	950	1200
AUG.												
01...	1130	159	77	20	210	94	860	9.2	334	0	930	1200
SEP.												
05...	1210	177	30	20	230	110	1100	9.7	328	0	1000	1500

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.												
05...	1.9	2.1	1500	4120	3820	5.60	1100	780	13	6160	7.6	22.0
NOV.												
02...	2.6	2.3	2300	4280	4370	5.82	1100	860	14	6650	7.6	15.0
DEC.												
07...	2.8	2.2	2000	4180	4190	5.68	1100	790	15	6340	7.7	14.0
JAN.												
04...	2.3	1.9	2100	3920	3690	5.33	1000	740	13	5990	7.7	8.0
FEB.												
01...	2.6	2.4	2000	4260	4250	5.79	1100	890	14	6490	7.8	13.0
MAR.												
07...	1.5	1.2	1000	2580	2650	3.51	780	530	9.8	3960	7.9	22.0
APR.												
04...	.5	.00	300	1240	1210	1.69	550	350	3.7	1890	7.9	22.0
MAY												
02...	1.9	2.0	1300	2990	2910	4.07	840	590	11	4550	7.9	24.0
JUNE												
06...	.8	.27	580	1580	1550	2.15	590	400	5.6	2430	7.8	30.0
JULY												
05...	2.0	2.0	1600	3650	3600	4.96	920	630	13	5490	8.0	23.8
AUG.												
01...	2.2	2.1	1700	3550	3510	4.83	910	640	12	5360	7.7	32.0
SEP.												
05...	3.0	2.4	1900	4070	4160	5.54	1000	760	15	6340	7.9	30.0

09522200 COLORADO RIVER AT SOUTHERLY INTERNATIONAL BOUNDARY, NEAR SAN LUIS, ARIZ. --Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT.							
15...	1020	250	6000	8.1	23.0	22.5	8.4
JAN.							
21...	1130	E240	7060	7.8	16.0	17.0	11.2
JULY							
20...	1105	161	5100	8.0	29.5	35.0	--

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.

LOCATION.--Lat 32°52'34", long 114°27'18", in SE¼SW¼ sec. 30, T. 8 S., R. 21 W., Gila and Salt River meridian, Yuma County, Ariz., at gaging station 0.6 mile downstream from intake at east end of Imperial Dam.

PERIOD OF RECORD.--Chemical analyses: October 1967 to September 1972 (partial-record station).
Water temperatures: January 1956 to September 1972.

EXTREMES.--1971-72:
Water temperatures: Maximum, 31.5°C July 30, 31, Aug. 1; minimum, 9.5°C on many days during December, January, and February.

Period of record:
Water temperatures: Maximum, 33.0°C Aug. 29-31, 1970; minimum, 7.0°C Jan. 13-17, 1964, Jan. 4-7, 1971.

REMARKS.--Temperature probe above water surface Nov. 26 to Dec. 3. No flow Nov. 27 to Dec. 2. Temperature recorder inoperative Sept. 20-30. Unpublished chemical analyses (partial record) for water years 1965-67 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 20...	1105	994	10	10	99	36	150	5.0	175	0	370	110
JAN. 19...	1350	500	11	0	100	37	150	7.5	163	0	380	180
APR. 12...	1410	1740	9.2	10	98	33	140	6.0	180	0	370	130
JULY 13...	0945	1850	9.9	10	90	33	130	5.5	171	0	330	120

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 20...	.4	.34	200	904	868	1.23	400	250	3.3	1390	8.1	20.5
JAN. 19...	.5	.04	230	986	947	1.34	400	270	3.3	1500	8.1	10.5
APR. 12...	.5	.31	200	868	877	1.18	380	230	3.1	1330	8.0	20.0
JULY 13...	.6	.27	170	838	804	1.14	360	220	3.0	1270	8.1	28.5

09522500 GILA GRAVITY MAIN CANAL AT IMPERIAL DAM, ARIZ.-CALIF.--Continued

TEMPERATURE (°C) OF WATER, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.5	20.5	14.0	13.5	---	---	11.0	11.0	9.5	9.5	15.5	15.5
2	20.5	20.0	13.5	13.5	---	---	11.0	11.0	9.5	9.5	15.5	15.5
3	20.0	20.0	13.5	13.5	---	---	11.0	11.0	9.5	9.5	15.5	15.5
4	20.0	20.0	14.0	13.5	12.0	12.0	11.0	11.0	9.5	9.5	16.5	15.5
5	21.0	20.0	14.5	14.0	12.0	11.5	11.0	11.0	10.0	9.5	18.0	16.5
6	22.0	21.0	15.0	14.5	11.5	11.5	11.0	11.0	10.5	10.5	18.0	18.0
7	23.0	22.0	15.0	15.0	11.5	11.5	11.0	11.0	11.0	10.5	18.0	18.0
8	24.0	23.0	15.0	15.0	11.5	10.5	11.0	11.0	11.0	11.0	18.5	18.0
9	25.0	24.0	15.5	15.0	10.5	10.0	11.0	11.0	11.0	11.0	18.5	18.5
10	25.0	25.0	15.5	15.5	10.5	9.5	11.0	11.0	11.5	11.0	19.0	18.5
11	25.0	24.5	15.5	15.5	9.5	9.5	11.0	11.0	11.5	11.5	19.0	18.5
12	25.0	24.5	15.5	15.5	9.5	9.5	11.0	11.0	12.0	11.5	19.0	18.5
13	25.0	24.5	15.0	15.0	9.5	9.5	11.0	11.0	12.0	11.5	19.0	18.5
14	24.5	24.0	15.0	15.0	9.5	9.5	11.0	10.5	12.0	11.5	19.0	18.5
15	24.0	23.5	15.0	14.5	9.5	9.5	10.5	10.5	12.0	12.0	19.0	18.5
16	23.5	21.0	14.5	14.0	9.5	9.5	10.5	10.5	13.0	12.0	19.0	18.5
17	21.0	20.0	14.0	13.0	9.5	9.5	10.5	10.5	13.0	13.0	19.0	19.0
18	20.0	18.5	13.0	13.0	10.0	9.5	10.5	10.5	14.0	13.0	19.5	19.0
19	18.5	18.0	13.0	11.5	10.0	10.0	10.5	10.5	14.5	14.0	20.0	19.5
20	18.0	18.0	11.5	11.0	10.0	10.0	10.5	10.5	14.5	14.5	20.0	20.0
21	18.5	18.0	11.0	11.0	10.0	10.0	10.5	10.0	14.5	14.5	20.5	20.0
22	18.5	18.0	11.0	11.0	10.0	10.0	10.0	10.0	15.0	14.5	20.0	20.0
23	19.0	18.5	11.5	11.0	11.0	10.0	10.0	10.0	15.5	15.0	20.0	20.0
24	19.0	18.5	11.5	11.5	13.0	11.0	10.0	10.0	15.5	15.5	20.0	20.0
25	18.5	17.0	11.5	10.5	13.5	12.0	10.0	10.0	15.5	15.5	20.0	20.0
26	17.0	17.0	---	---	13.5	12.0	10.0	10.0	15.5	15.5	20.0	19.5
27	17.0	17.0	---	---	13.0	13.0	10.0	10.0	15.5	15.5	19.5	19.0
28	17.0	16.5	---	---	13.0	13.0	10.0	9.5	15.5	15.5	19.0	19.0
29	16.5	16.0	---	---	13.0	13.0	10.0	9.5	15.5	15.5	19.0	19.0
30	16.0	15.0	---	---	13.0	12.0	10.0	9.5	---	---	19.0	17.0
31	15.0	14.0	---	---	12.0	11.0	9.5	9.5	---	---	18.0	17.0
MONTH	25.0	14.0	15.5	10.5	13.5	9.5	11.0	9.5	15.5	9.5	20.5	15.5

	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.5	18.0	23.0	22.0	27.0	26.5	29.0	28.5	31.5	30.5	29.5	29.0
2	19.5	18.5	23.0	22.0	27.0	26.5	29.0	28.0	30.5	30.0	29.5	29.0
3	20.5	19.5	23.5	23.0	27.0	26.5	28.0	27.0	30.0	29.5	29.5	29.0
4	20.5	20.5	23.5	23.0	28.0	27.0	28.0	27.0	30.0	29.0	30.0	29.5
5	21.5	20.5	23.5	23.0	28.0	28.0	28.5	28.0	29.5	29.0	30.0	29.5
6	21.5	21.0	23.0	22.0	28.0	28.0	29.0	28.5	29.5	29.5	30.0	29.0
7	21.0	20.5	22.0	22.0	28.0	27.0	29.0	28.5	30.0	29.5	29.0	28.5
8	21.5	21.0	22.0	22.0	28.0	26.5	29.5	28.5	30.0	29.5	28.5	28.5
9	21.5	21.5	23.0	22.0	27.0	26.0	29.5	29.0	30.0	29.5	28.5	27.0
10	21.5	21.0	23.5	23.0	27.0	26.0	29.5	29.0	29.5	29.0	28.0	27.0
11	21.0	21.0	23.5	23.0	28.0	26.5	29.5	29.0	30.0	29.0	28.0	26.5
12	21.0	20.5	24.0	23.5	28.5	27.0	29.5	29.0	30.0	29.5	26.5	26.0
13	21.0	19.0	24.0	23.5	28.5	28.0	29.5	29.0	30.0	29.5	26.5	26.0
14	19.0	18.0	24.0	23.5	28.5	28.0	29.5	29.5	30.0	29.5	26.5	26.0
15	18.5	18.0	24.5	24.0	28.5	28.0	29.5	29.0	29.5	28.5	26.5	26.0
16	19.0	18.5	24.5	24.5	29.0	28.5	29.5	29.0	28.5	28.0	27.0	26.5
17	19.5	19.0	24.5	24.5	29.0	28.5	29.0	28.5	28.0	27.0	27.0	27.0
18	19.5	19.5	24.5	24.5	29.0	28.5	29.0	28.5	27.0	26.5	27.0	27.0
19	19.5	19.0	24.5	23.0	28.5	28.0	29.0	28.5	27.0	26.5	27.0	26.5
20	19.0	19.0	23.5	22.0	28.5	28.0	29.0	28.0	28.0	27.0	---	---
21	19.5	19.0	22.0	22.0	28.5	28.0	28.0	27.0	29.0	28.0	---	---
22	20.0	19.5	23.0	22.0	28.5	28.0	28.5	27.0	29.5	28.5	---	---
23	21.0	20.0	24.0	23.0	28.0	26.5	29.0	28.0	29.5	29.0	---	---
24	21.0	21.0	24.5	24.0	27.0	26.5	29.0	28.5	29.5	29.0	---	---
25	21.0	20.5	24.5	24.0	27.0	26.5	29.0	28.5	29.0	28.0	---	---
26	20.5	20.5	25.0	24.5	27.0	26.5	30.0	29.0	28.5	28.0	---	---
27	20.5	20.5	25.5	25.0	27.0	26.5	31.0	30.0	28.5	28.0	---	---
28	20.5	20.5	26.0	25.5	28.0	26.5	31.0	30.5	28.5	27.0	---	---
29	21.5	20.5	26.0	25.0	28.5	28.0	31.0	30.5	28.5	28.0	---	---
30	23.0	21.5	26.0	25.5	29.0	28.0	31.5	30.5	28.5	27.0	---	---
31	---	---	26.5	26.0	---	---	31.5	---	29.0	28.0	---	---
MONTH	23.0	18.0	26.5	22.0	29.0	26.0	31.5	27.0	31.5	26.5	---	---

MAXIMUM VALUE = 31.5 MINIMUM VALUE = 9.5

09529160 SOUTH GILA PUMP OUTLET CHANNEL NO. 3 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°43'04'', long 114°30'12'', in NW¼SE¼ sec.22, T.8 S., R.22 W., Yuma County, at gaging station 0.5 mile upstream from outlet to Gila River, and 6 miles east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--No flow Oct. 9-15, 19-24, 27-31, Nov. 1, 4, 7-20, 28, Dec. 4-10, 14, 15, May 5-10, 12-14, 17-21, 29, June 25, Sept. 30. Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JAN. 14...	0945	--	28	60	170	71	440	6.7	256	0	220	910
FEB. 16...	1535	--	28	10	250	110	650	9.5	345	0	420	1300
MAR. 14...	1220	45	27	10	260	110	790	11	386	0	540	1400
APR. 17...	1020	45	27	10	270	110	780	10	371	0	560	1400
JULY 20...	0815	33	26	20	290	120	940	11	382	0	680	1600
AUG. 15	0930	32	27	20	290	130	900	9.9	377	0	630	1600
SEP. 15...	1220	34	27	10	280	120	890	10	384	0	620	1600

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JAN. 14...	.7	.02	440	2010	1970	2.73	720	510	7.2	3550	7.8	20.5
FEB. 16...	.7	.04	620	2890	2940	3.93	1100	790	8.6	4840	7.6	21.0
MAR. 14...	.7	.63	890	3540	3330	4.81	1100	780	10	5480	7.6	27.0
APR. 17...	.7	.66	910	3380	3340	4.60	1100	820	10	5570	7.7	22.5
JULY 20...	.7	.64	1100	4240	3860	5.77	1200	900	12	6440	7.6	22.0
AUG. 15...	.7	.75	1100	4130	3780	5.62	1300	950	11	5990	7.6	22.5
SEP. 15...	.7	.67	1100	--	3740	5.09	1200	880	11	5960	7.8	23.0

09529240 SOUTH GILA PUMP OUTLET CHANNEL NO. 2 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'31", long 114°31'45", in NW¼SW¼ sec. 28, T. 8 S., R. 22 W., Yuma County, at gaging station 0.6 mile upstream from outlet to Gila River, and 4 miles east of Yuma.

PERIOD OF RECORD.--October 1968 to September 1972.

REMARKS.--No flow May 3-6, 22, 23, June 10, 11, 16-19. Unpublished miscellaneous chemical analyses for water years 1965-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT. 15...	1225	18	27	10	130	48	400	4.8	260	0	430	480
NOV. 16...	1200	19	27	10	140	49	390	5.5	270	0	500	490
DEC. 13...	1230	44	27	0	130	58	470	6.5	287	0	430	660
JAN. 12...	1200	33	28	30	160	60	500	6.5	279	0	450	760
FEB. 15...	1420	44	27	10	140	55	450	7.0	287	0	430	670
MAR. 28...	1135	42	27	10	140	56	470	6.6	276	0	460	670
APR. 27...	0940	41	27	10	150	56	470	7.1	284	0	470	660
JUNE 22...	0815	8.0	28	30	82	42	350	5.1	297	0	470	270
JULY 24...	1045	41	27	10	130	48	450	6.0	291	0	440	580
AUG. 25...	0745	39	26	70	120	49	460	7.3	291	0	430	570
SEP. 15...	1240	39	26	10	120	48	440	5.8	293	0	420	590

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180 C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
OCT. 15...	.8	1.5	720	1680	1660	2.28	520	310	7.6	2690	8.0	24.5
NOV. 16...	1.0	1.6	730	--	1740	2.37	550	330	7.2	2710	7.9	23.0
DEC. 13...	1.1	.59	760	1940	1930	2.64	560	330	8.6	3230	7.7	23.0
JAN. 12...	.9	.01	670	2030	2100	2.76	650	420	8.6	3450	7.8	23.0
FEB. 15...	.8	.71	710	1910	1920	2.60	580	340	8.2	3210	7.7	22.5
MAR. 28...	.9	.70	720	1970	1970	2.68	580	350	8.5	3200	7.9	24.0
APR. 27...	1.0	.76	740	1970	1980	2.68	600	370	8.3	3210	7.8	23.5
JUNE 22...	1.3	3.8	760	1390	1410	1.89	380	130	7.8	2210	7.6	23.5
JULY 24...	.9	1.4	760	1840	1830	2.50	520	280	8.6	2980	7.6	24.0
AUG. 25...	1.3	1.3	780	1890	1810	2.57	500	260	8.9	3010	7.9	23.0
SEP. 15...	.9	1.3	770	1850	1800	2.52	500	260	8.6	3000	7.8	24.0

09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.

LOCATION.--Lat 32°44'35", long 114°26'02", in NW¼NE¼ sec. 17, T. 8 S., R. 21 W., Yuma County, at gaging station, 8 miles upstream from outlet to Gila River, and 11 miles east of Yuma.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)
OCT.								
04...	--	--	23	--	264	112	--	1040
12...	--	--	24	--	268	115	--	1100
18...	--	--	24	--	254	123	--	1080
25...	0250	--	26	--	270	116	--	1130
NOV.								
01...	--	--	25	--	274	118	--	1130
08...	--	--	24	--	274	116	--	1120
15...	0300	--	25	--	246	121	--	1090
22...	--	--	26	--	274	113	--	1110
29...	--	--	25	--	258	121	--	1110
DEC.								
06...	--	--	26	--	270	113	--	1110
13...	--	--	25	--	270	118	--	1100
20...	--	--	26	--	260	122	--	1120
27...	--	--	25	--	262	123	--	1100
JAN.								
03...	--	--	25	--	270	113	--	1100
10...	0230	--	25	--	258	123	--	1100
17...	0225	--	25	--	274	121	--	1100
24...	--	--	24	--	254	123	--	1070
31...	--	--	25	--	274	106	--	1110
FEB.								
07...	0415	--	25	--	264	115	--	1070
14...	--	--	23	--	232	93	--	772
21...	--	--	24	--	240	107	--	911
28...	0315	--	23	--	234	101	--	886
MAR.								
06...	0130	--	22	--	228	102	--	874
13...	0130	--	24	--	236	110	--	929
20...	0315	--	23	--	242	106	--	893
27...	--	--	24	--	244	100	--	900
APR.								
03...	0245	--	24	--	238	96	--	890
10...	--	--	25	--	238	104	--	886
17...	0235	--	24	--	244	105	--	908
24...	--	--	24	--	214	89	--	779
MAY								
01...	0245	--	24	--	212	85	--	741
08...	--	--	24	--	212	93	--	765
15...	0210	--	23	--	222	89	--	779
22...	--	--	23	--	210	91	--	775
29...	0210	--	25	--	226	96	--	778
JUNE								
05...	--	--	22	--	206	91	--	794
12...	0135	--	23	--	212	90	--	749
19...	--	--	23	--	210	89	--	745
26...	0235	--	24	--	246	99	--	820
JULY								
03...	0100	--	28	20	250	92	890	--
10...	0215	291	23	--	224	102	--	818
17...	--	294	24	--	236	95	--	832
24...	0500	300	25	--	258	116	--	1060
31...	--	288	25	--	238	94	--	875
AUG.								
07...	--	296	24	--	228	95	--	831
14...	--	308	25	--	222	96	--	798
21...	0335	306	25	--	230	94	--	823
28...	--	296	23	--	234	101	--	845
SEP.								
04...	--	286	26	--	258	116	--	1060
11...	--	307	25	--	252	115	--	1050
18...	--	304	24	--	254	113	--	1060
25...	0305	306	24	--	248	112	--	1050

09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.--Continued

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished chemical analyses (continuing record) for water years 1961-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
04...	--	404	--	1010	1420	--	--	--	4420
12...	--	408	--	1010	1520	--	--	--	4420
18...	--	408	--	990	1500	--	--	--	4370
25...	--	422	--	1010	1560	--	--	--	4520
NOV.									
01...	--	424	--	1020	1570	--	--	--	4410
08...	--	416	--	1020	1560	--	--	--	4370
15...	--	360	--	980	1530	--	--	--	4280
22...	--	428	--	1010	1540	--	--	--	4370
29...	--	422	--	1020	1520	--	--	--	4440
DEC.									
06...	--	426	--	1020	1520	--	--	--	4420
13...	--	426	--	1020	1520	--	--	--	4430
20...	--	424	--	1020	1540	--	--	--	4380
27...	--	396	--	1020	1540	--	--	--	4400
JAN.									
03...	--	426	--	1000	1520	--	--	--	4340
10...	--	428	--	1000	1520	--	--	--	4270
17...	--	432	--	1020	1540	--	--	--	4340
24...	--	422	--	990	1480	--	--	--	4240
31...	--	432	--	1000	1520	--	--	--	4350
FEB.									
07...	--	432	--	1000	1460	--	--	--	4300
14...	--	368	--	890	1000	--	--	--	3320
21...	--	424	--	930	1210	--	--	--	3660
28...	--	420	--	910	1160	--	--	--	3640
MAR.									
06...	--	418	--	890	1150	--	--	--	3580
13...	--	420	--	930	1240	--	--	--	3770
20...	--	428	--	930	1180	--	--	--	3650
27...	--	420	--	930	1180	--	--	--	3690
APR.									
03...	--	422	--	920	1150	--	--	--	3600
10...	--	424	--	940	1150	--	--	--	3640
17...	--	420	--	940	1200	--	--	--	3660
24...	--	404	--	860	970	--	--	--	3210
MAY									
01...	--	408	--	840	910	--	--	--	3070
08...	--	408	--	850	960	--	--	--	3130
15...	--	406	--	850	990	--	--	--	3190
22...	--	384	--	840	990	--	--	--	3230
29...	--	410	--	870	1000	--	--	--	3320
JUNE									
05...	--	390	--	880	980	--	--	--	3160
12...	--	388	--	850	940	--	--	--	3090
19...	--	384	--	850	930	--	--	--	3120
26...	--	388	--	870	1120	--	--	--	3490
JULY									
03...	9.5	442	0	960	1200	2.3	2.4	1700	3600
10...	--	416	--	900	1050	--	--	--	3470
17...	--	420	--	900	1070	--	--	--	3590
24...	--	428	--	1000	1440	--	--	--	4320
31...	--	422	--	920	1120	--	--	--	3620
AUG.									
07...	--	422	--	890	1060	--	--	--	3470
14...	--	416	--	870	1020	--	--	--	3290
21...	--	424	--	900	1040	--	--	--	3430
28...	--	424	--	930	1080	--	--	--	3540
SEP.									
04...	--	424	--	1000	1440	--	--	--	4240
11...	--	420	--	1000	1420	--	--	--	4240
18...	--	420	--	1020	1420	--	--	--	4290
25...	--	420	--	1010	1400	--	--	--	4220

09529300 WELLTON-MOHAWK MAIN OUTLET DRAIN NEAR YUMA, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
04...	4070	6.01	1120	788	14	6620	7.9	--
12...	4240	6.01	1140	806	14	6670	8.0	--
18...	4180	5.94	1140	806	14	6570	7.9	--
25...	4320	6.15	1150	804	15	6770	8.0	--
NOV.								
01...	4350	6.00	1170	822	14	6890	8.0	--
08...	4320	5.94	1160	819	14	6830	7.9	--
15...	4170	5.82	1110	815	14	6710	8.0	--
22...	4290	5.94	1150	800	14	6740	8.0	--
29...	4260	6.04	1140	794	14	6760	8.1	--
DEC.								
06...	4270	6.01	1140	790	14	6690	8.0	--
13...	4270	6.02	1160	810	14	6700	8.0	--
20...	4300	5.96	1150	802	14	6740	7.9	--
27...	4270	5.98	1160	836	14	6760	8.0	--
JAN.								
03...	4240	5.90	1140	790	14	6660	8.0	--
10...	4240	5.81	1150	799	14	6650	8.0	--
17...	4310	5.90	1180	826	14	6740	7.9	--
24...	4150	5.77	1140	794	14	6590	8.0	--
31...	4250	5.92	1120	766	14	6660	8.0	--
FEB.								
07...	4150	5.85	1130	776	14	6500	8.1	--
14...	3190	4.52	960	658	11	5010	8.0	--
21...	3630	4.98	1040	692	12	5680	8.0	--
28...	3520	4.95	1000	656	12	5510	8.0	--
MAR.								
06...	3480	4.87	990	647	12	5480	8.0	--
13...	3680	5.13	1040	696	13	5770	8.0	--
20...	3590	4.96	1040	689	12	5600	8.0	--
27...	3590	5.02	1020	676	12	5590	8.0	--
APR.								
03...	3530	4.90	990	644	12	5510	8.0	--
10...	3560	4.95	1020	672	12	5560	8.0	--
17...	3630	4.98	1040	696	12	5630	7.9	--
24...	3140	4.37	900	568	11	4890	8.0	--
MAY								
01...	3020	4.18	880	546	11	4690	8.0	23.0
08...	3110	4.26	910	576	11	4790	8.1	--
15...	3160	4.34	920	587	11	4920	8.0	22.0
22...	3120	4.39	900	585	11	4910	8.0	--
29...	3200	4.52	960	624	11	5020	8.0	25.5
JUNE								
05...	3170	4.30	890	570	12	4920	8.0	--
12...	3060	4.20	900	582	11	4800	8.0	25.5
19...	3040	4.24	890	575	11	4760	8.0	--
26...	3370	4.75	1020	702	11	5250	8.0	--
JULY								
03...	3660	4.90	1000	640	12	5530	7.9	--
10...	3320	4.72	980	639	11	5210	8.0	28.0
17...	3370	4.88	980	636	12	5310	7.9	--
24...	4110	5.88	1120	769	14	6490	8.0	--
31...	3480	4.92	980	634	12	5450	8.0	--
AUG.								
07...	3340	4.72	960	614	12	5260	8.0	--
14...	3240	4.47	950	609	11	5070	8.1	--
21...	3320	4.66	960	612	12	5160	8.0	--
28...	3420	4.81	1000	652	12	5390	8.0	--
SEP.								
04...	4110	5.77	1120	772	14	6470	8.0	--
11...	4070	5.77	1100	756	14	6440	8.0	--
18...	4100	5.83	1100	756	14	6460	8.0	--
25...	4050	5.74	1080	736	14	6380	8.0	--

09529360 SOUTH GILA PUMP OUTLET CHANNEL NO. 1 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'24", long 114°33'19", in SW¼NE¼ sec. 30, T. 8 S., R. 22 W., Yuma County, at gaging station, 0.2 mile upstream from outlet to Gila River, and 4 miles east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 15...	1110	45	27	30	150	62	500	5.6	302	0	560	600
NOV. 16...	1045	46	26	20	150	59	490	5.8	299	0	530	670
DEC. 13...	1415		27	0	150	59	470	6.7	304	0	510	670
JAN. 12...	1050	46	26	40	160	58	480	8.4	297	0	520	660
FEB. 17...	1515	45	27	0	150	59	450	6.4	301	0	510	650
MAR. 28...	1020	45	26	10	150	58	480	6.7	295	0	500	640
APR. 28...	1315	43	26	10	150	58	500	6.7	299	0	510	670
MAY 26...	1145	27	25	20	140	52	430	6.2	286	0	470	560
JUNE 22...	1010	39	25	20	140	52	450	7.0	287	0	550	580
JULY 25...	0915	49	25	10	160	56	460	6.6	295	0	530	630
AUG. 25...	0915	47	25	40	140	56	480	8.0	294	0	510	630
SEP. 15...	1255	48	25	10	140	56	460	6.3	300	0	490	630

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 15...	.8	.90	730	2050	2060	2.79	630	380	8.7	3350	7.8	23.5
NOV. 16...	1.0	.92	710	--	2080	2.83	620	370	8.6	3330	7.8	23.0
DEC. 13...	1.1	.81	700	2050	2050	2.79	620	370	8.2	3340	7.7	21.5
JAN. 12...	.9	.73	690	2030	2060	2.76	640	390	8.3	3320	7.9	23.0
FEB. 17...	.9	.81	690	--	2010	2.73	620	370	7.9	3250	7.8	23.0
MAR. 28...	.7	.88	710	2040	2010	2.77	610	370	8.4	3260	7.9	24.0
APR. 28...	1.1	.89	700	2030	2070	2.76	610	370	8.8	3300	7.8	25.0
MAY 26...	1.0	.55	660	1850	1830	2.52	560	330	7.9	2980	7.6	25.0
JUNE 22...	1.0	.46	720	1940	1950	2.64	560	330	8.2	3160	7.6	24.0
JULY 25...	.9	.47	700	2030	2020	2.76	630	390	8.0	3270	7.6	24.0
AUG. 25...	1.1	.45	710	2030	2000	2.76	580	340	8.7	3200	7.9	23.5
SEP. 15...	1.0	.50	690	2010	1960	2.73	580	330	8.3	3190	7.8	24.5

09529440 SOUTH GILA PUMP OUTLET CHANNEL NO. 4 NEAR YUMA, ARIZ.

LOCATION.--Lat 32°42'46", long 114°35'50", in NW¼NW¼ sec. 26, T. 8 S., R. 23 W., Yuma County, at gaging station, 1.5 miles upstream from outlet to Colorado River, and 1.5 miles east of Yuma.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--No flow for many days of most months. Unpublished miscellaneous chemical analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 19...	1600	.10	11	10	95	36	170	5.4	179	0	370	140
FEB. 16...	0935	1.0	28	0	480	190	920	9.8	379	0	540	2300
MAR. 14...	1550	11	23	10	330	130	800	9.6	360	0	570	1600
APR. 17...	1255	29	27	20	310	120	840	9.1	351	0	620	1500
JULY 20...	1010	19	25	10	260	100	750	7.9	356	0	640	1200
AUG. 15...	1100	19	25	10	280	100	730	7.7	341	0	650	1300
SEP. 15...	1305	18	26	10	260	100	730	7.9	347	0	670	1300

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 19...	.5	.20	220	948	917	1.29	390	240	3.8	1480	8.1	20.0
FEB. 16...	.4	.04	570	4820	4660	6.56	2000	1700	9.0	7740	7.6	23.0
MAR. 14...	.4	.21	670	--	3640	4.95	1400	1100	9.4	6060	7.5	24.0
APR. 17...	.6	.05	710	3730	3600	5.07	1300	980	10	5980	7.4	24.5
JULY 20...	.6	.05	750	3510	3160	4.77	1100	770	10	5290	7.5	24.0
AUG. 15...	.6	.13	760	3580	3260	4.87	1100	830	9.5	5100	7.6	24.0
SEP. 15...	.6	.03	740	3460	3270	4.71	1100	780	9.8	5010	7.7	24.0

09530000 RESERVATION MAIN DRAIN NO. 4 AT YUMA, ARIZ.

(Formerly published as 09530000, Reservation Main Drain No. 4 near Yuma, Ariz.)

LOCATION.--Lat 32°44'09", long 114°37'16", in NW¼SE¼ sec.26, T.16 S., R.22 E., San Bernardino meridian, Imperial County, Calif., at gaging station, at railroad culvert, 0.2 mile upstream from crossing of U.S. Highway 80, and 0.7 mile north of Yuma.

PERIOD OF RECORD.--October 1968 to September 1972.

REMARKS.--Unpublished miscellaneous chemical analyses for water years 1962-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT.												
22...	0945	--	23	20	170	49	240	4.9	294	0	530	270
NOV.												
19...	0945	54	24	10	160	51	240	4.7	287	0	520	270
DEC.												
20...	1315	49	23	0	160	50	230	5.1	282	0	500	270
JAN.												
21...	1220	61	20	10	150	47	210	6.8	266	0	510	250
FEB.												
08...	1500	44	22	10	160	46	220	5.3	279	0	470	260
MAR.												
20...	1045	49	22	10	160	49	230	5.8	292	0	500	270
APR.												
24...	1135	54	23	10	160	53	230	5.6	280	0	490	270
MAY												
24...	0845	--	24	60	160	49	230	5.5	274	0	490	250
JUNE												
23...	1050	50	23	20	160	49	220	5.4	290	0	490	260
JULY												
24...	0915	55	21	10	160	47	220	5.2	275	0	490	230
AUG.												
03...	0900	56	23	0	160	49	240	5.0	277	0	520	260
SEP.												
07...	1120	52	21	40	150	47	210	5.2	260	0	500	240

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.												
22...	.4	.31	250	1370	1430	1.86	630	380	4.2	2120	7.5	19.0
NOV.												
19...	.6	.34	260	--	1410	1.92	610	370	4.2	2130	7.7	15.5
DEC.												
20...	.5	.15	240	1400	1380	1.90	600	370	4.1	2100	7.7	18.0
JAN.												
21...	.6	.25	250	1300	1330	1.77	570	350	3.8	1980	7.8	15.0
FEB.												
08...	.4	.12	270	1360	1320	1.85	590	360	3.9	2060	7.9	20.0
MAR.												
20...	.6	.16	250	1400	1380	1.90	600	360	4.1	2100	7.8	20.5
APR.												
24...	.4	.20	290	1390	1370	1.89	620	390	4.0	2080	7.8	23.0
MAY												
24...	.4	.21	250	1380	1340	1.88	600	380	4.1	2060	6.6	21.0
JUNE												
23...	.5	.20	260	1400	1350	1.90	600	360	3.9	2110	7.5	25.0
JULY												
24...	.4	.07	240	1310	1310	1.78	590	370	3.9	1990	7.5	26.0
AUG.												
03...	.4	.20	270	1430	1390	1.94	600	370	4.3	2120	7.8	25.0
SEP.												
07...	.5	.16	240	1320	1300	1.80	570	350	3.8	1980	8.0	26.0

09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.

LOCATION.--Lat 32°43'43", long 114°42'24", in NW¼ sec. 36, T. 16 S., R. 21 E., San Bernardino meridian, Yuma County, at gaging station at gate structure dividing M. O. D. E. 2 and M. O. D. E. 3, and 2 miles northeast of Morelos Dam.

PERIOD OF RECORD.--Chemical analyses: August 1969 to September 1972.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 15...	0840	295	31	20	260	110	1200	8.3	385	0	1200	1500
NOV. 18...	0900	314	32	10	270	120	1100	8.7	368	0	950	1700
DEC. 16...	0910	--	31	0	270	120	1100	11	415	0	1000	1600
JAN. 24...	0845	--	31	30	260	110	1200	13	395	0	1100	1700
FEB. 17...	0915	300	29	0	240	100	870	9.4	383	0	980	1200
MAR. 16...	0915	280	28	10	230	100	970	10	378	0	980	1200
APR. 20...	0920	286	29	0	230	92	920	9.3	366	0	950	1200
MAY 18...	0900	30	28	20	210	90	780	8.7	362	0	890	1000
JUNE 22...	0920	205	28	20	200	92	760	9.7	353	0	890	950
JULY 20...	0935	278	29	20	250	110	1100	9.7	369	0	1100	1500
AUG. 17...	1115	300	29	20	220	91	810	8.6	366	0	880	1100
SEP. 13...	0915	166	28	20	230	100	1100	9.3	378	0	1000	1400

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 15...	1.6	2.4	1500	4200	4510	5.71	1100	790	16	6810	7.8	20.0
NOV. 18...	2.6	2.5	1600	4400	4380	5.98	1200	870	14	6870	7.6	18.0
DEC. 16...	2.9	2.3	2000	3900	4350	5.30	1200	830	14	6940	7.9	16.0
JAN. 24...	2.5	2.4	2600	4620	4620	6.28	1100	780	16	7020	7.6	18.0
FEB. 17...	1.5	2.1	2500	3780	3630	5.14	1000	700	12	5730	7.6	19.0
MAR. 16...	3.5	2.7	1300	4100	3720	5.58	990	680	13	5770	7.7	22.0
APR. 20...	2.3	2.5	1	4120	3620	5.60	950	650	13	5550	7.7	20.0
MAY 18...	2.1	2.2	1400	3200	3200	4.35	890	600	11	5100	7.8	23.0
JUNE 22...	2.0	2.6	1500	3580	3120	4.87	880	590	11	4840	7.6	27.0
JULY 20...	2.7	2.3	1200	4200	4290	5.71	1100	770	15	6610	7.4	26.0
AUG. 17...	3.4	2.4	480	3580	3330	4.87	920	620	12	5000	7.6	25.0
SEP. 13...	2.5	2.4	2000	4220	4070	5.74	990	680	15	6060	7.8	25.0

09531700 MAIN OUTLET DRAIN EXTENSION NEAR MORELOS DAM, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
OCT. 15...	0840	295	6000	8.0	23.0	20.0	7.9
NOV. 18...	0900	314	6500	7.8	18.0	9.0	9.3
DEC. 16...	0910	303	6020	7.9	16.0	9.0	9.6
JAN. 21...	0950	293	6080	7.7	18.0	11.0	9.4
FEB. 17...	0915	300	5100	7.7	19.0	11.0	8.8
MAR. 16...	0915	280	5400	7.8	22.0	24.0	8.5
APR. 20...	0920	286	4980	7.9	20.0	19.0	9.1
MAY 18...	0900	269	4600	7.8	23.0	24.0	8.0
JUNE 22...	0920	205	4400	7.9	27.0	30.0	7.8
JULY 20...	0935	278	6000	8.0	26.0	32.0	7.8
SEP. 13...	0915	305	5990	7.9	25.0	28.0	8.4

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)
SEP. 13...	0915	305	.00	.0	.00	.00	.00	.00

DATE	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
SEP. 13...	.00	.00	.00	.00	.00	.00	.00

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.

(Formerly published as 09534000 Main Drain near San Luis, Ariz.)

LOCATION.--Lat 32°29'17", long 114°47'16", in SE¼NE¼ sec.11, T.11 S., R.25 W., Yuma County, at gaging station at pumping plant, 0.1 mile upstream from international boundary, and 0.4 mile west of San Luis.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--Unpublished chemical analyses (continuing record) from October 1961 to September 1968 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS- CHARGE (CFS)	DIS- SOLVED SILICA (SIO2) (MG/L)	DIS- SOLVED IRON (FE) (UG/L)	DIS- SOLVED CAL- CIUM (CA) (MG/L)	DIS- SOLVED MAG- NE- SIUM (MG) (MG/L)	DIS- SOLVED SODIUM (NA) (MG/L)	DIS- SOLVED SODIUM PLUS POTAS- SIUM (MG/L)
OCT.								
04...	0845	165	15	10	110	42	220	--
NOV.								
01...	0915	170	24	10	140	46	320	--
15...	--	--	19	--	144	54	--	309
DEC.								
06...	0925	167	24	10	140	50	340	--
20...	--	--	17	--	120	61	--	295
JAN.								
03...	1000	160	25	10	160	51	320	--
17...	--	--	20	--	143	58	--	328
FEB.								
01...	1015	165	25	0	160	50	330	--
14...	--	--	22	--	149	54	--	331
MAR.								
06...	0920	166	24	10	140	49	330	--
20...	--	--	19	--	141	55	--	314
APR.								
03...	0950	180	24	40	150	54	340	--
17...	--	--	16	--	143	54	--	330
MAY								
02...	1100	210	23	10	160	56	360	--
15...	--	--	21	--	153	58	--	352
JUNE								
05...	0940	168	20	30	140	49	280	--
19...	--	--	20	--	147	52	--	342
JULY								
05...	1110	166	24	10	150	53	350	--
17...	--	--	20	--	143	54	--	335
AUG.								
01...	0940	170	24	50	150	51	310	--
14...	--	170	22	--	122	63	--	322
SEP.								
05...	1020	170	24	20	150	53	340	--
18...	--	165	20	--	153	52	--	325

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS- SOLVED PO- TAS- SIUM (K) (MG/L)	BICAR- BONATE (HCO3) (MG/L)	CAR- BONATE (CO3) (MG/L)	DIS- SOLVED SULFATE (SO4) (MG/L)	DIS- SOLVED CHLO- RIDE (CL) (MG/L)	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (RESI- DUE AT 180 C) (MG/L)
OCT.									
04...	5.0	199	0	460	210	.3	.29	290	1220
NOV.									
01...	5.8	279	0	490	400	.6	.67	410	1600
15...	--	276	--	470	380	--	--	--	1560
DEC.									
06...	5.9	285	0	490	390	.5	.74	420	1640
20...	--	262	--	470	345	--	--	--	1550
JAN.									
03...	8.1	289	0	550	400	.6	.67	430	1660
17...	--	284	--	470	415	--	--	--	1610
FEB.									
01...	5.6	274	0	530	420	.6	.69	430	1600
14...	--	282	--	500	400	--	--	--	1700
MAR.									
06...	6.9	281	0	500	400	.4	.72	390	1590
20...	--	266	--	490	380	--	--	--	1620
APR.									
03...	6.2	294	0	510	430	.5	.76	450	1730
17...	--	276	--	500	390	--	--	--	1650
MAY									
02...	7.9	285	0	540	430	.5	.76	430	1750
15...	--	296	--	530	420	--	--	--	1780
JUNE									
05...	6.2	255	0	480	340	.6	.51	390	1530
19...	--	274	--	500	410	--	--	--	1670
JULY									
05...	5.8	277	0	510	410	.6	.58	440	1700
17...	--	274	--	500	400	--	--	--	1660
AUG.									
01...	5.9	272	0	520	390	.5	.62	410	1700
14...	--	268	--	490	380	--	--	--	1620
SEP.									
05...	6.2	283	0	490	410	.7	.55	430	1680
18...	--	288	--	490	395	--	--	--	1670

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
04...	1160	1.58	450	280	4.5	1810	8.0	21.0
NOV.								
01...	1570	2.18	540	310	6.0	2440	7.8	18.0
15...	1510	2.12	580	354	5.6	2480	8.0	--
DEC.								
06...	1580	2.23	560	320	6.3	2490	7.9	16.5
20...	1440	2.11	550	335	5.5	2310	7.9	--
JAN.								
03...	1660	2.26	610	370	5.6	2500	7.9	14.5
17...	1580	2.19	595	362	5.8	2560	8.0	--
FEB.								
01...	1660	2.18	600	380	5.8	2550	8.0	15.5
14...	1600	2.31	595	364	5.9	2550	8.0	--
MAR.								
06...	1590	2.16	550	320	6.1	2500	7.9	21.0
20...	1530	2.20	580	362	5.7	2430	7.9	--
APR.								
03...	1660	2.35	600	360	6.1	2620	7.9	21.0
17...	1570	2.24	580	354	6.0	2500	8.0	--
MAY								
02...	1720	2.38	630	400	6.2	2660	7.8	23.0
15...	1680	2.42	620	378	6.1	2630	8.0	--
JUNE								
05...	1440	2.08	550	340	5.2	2300	7.7	28.0
19...	1610	2.27	580	356	6.2	2550	8.0	--
JULY								
05...	1640	2.31	590	370	6.3	2580	8.0	29.0
17...	1590	2.26	580	356	6.1	2510	8.0	--
AUG.								
01...	1590	2.31	580	360	5.6	2490	8.1	30.0
14...	1530	2.20	565	345	5.9	2440	8.0	--
SEP.								
05...	1620	2.28	590	360	6.1	2580	7.9	27.0
18...	1580	2.27	595	359	5.8	2540	8.0	--

09534000 MAIN DRAIN AT SAN LUIS, ARIZ.--Continued

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)	FECAL COLI-FORM (COL. PER 100 ML)
JULY 19...	0900	--	--	--	--	--	--	140
SEP. 13...	1100	166	2000	7.8	26.0	33.0	8.0	--
14...	1000	--	--	--	--	--	--	530

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	CHLOR-DANE (UG/L)	DDD (UG/L)	DDE (UG/L)	DDT (UG/L)	DI-ELDRIN (UG/L)
AUG. 16...	1045	165	.00	.0	.00	.00	.01	.00
SEP. 13...	1100	166	.00	.0	.00	.00	.00	.00

DATE	ENDRIN (UG/L)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR EPOXIDE (UG/L)	LINDANE (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
AUG. 16...	.00	.00	.00	.00	.00	.00	.00
SEP. 13...	.00	.00	.00	.00	.00	.00	.00

09534300 WEST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.

(Formerly published as 09534300 West Main Canal wasteway near Yuma, Ariz.)

LOCATION.--Lat 32°29'29", long 114°47'39", in SE¼NE¼ sec. 11, T. 11 S., R. 25 W., Yuma County, at gaging station, 150 ft upstream from outlet into Main Drain, 300 ft north of international boundary, 0.2 mile west of San Luis, Ariz., and 19 miles south of Yuma.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)
OCT.								
12...	--	--	8.0	--	89	38	--	162
26...	--	--	7.0	--	90	38	--	150
NOV.								
08...	--	--	6.0	--	98	38	--	168
22...	--	--	9.0	--	99	35	--	172
DEC.								
13...	--	--	9.0	--	96	39	--	162
27...	--	--	7.0	--	92	40	--	157
JAN.								
10...	--	--	8.0	--	98	34	--	148
24...	--	--	7.0	--	98	39	--	166
31...	--	--	8.0	--	98	37	--	160
FEB.								
07...	--	--	8.0	--	93	37	--	150
28...	--	--	6.0	--	89	36	--	141
MAR.								
13...	--	--	7.0	--	95	36	--	142
27...	--	--	7.0	--	95	36	--	146
APR.								
10...	--	--	7.0	--	95	36	--	148
24...	--	--	5.0	--	94	37	--	149
MAY								
08...	--	--	5.0	--	95	36	--	140
22...	--	--	5.0	--	94	35	--	155
JUNE								
26...	--	--	7.0	--	87	35	--	134
JULY								
06...	0820	2.5	11	10	91	34	150	--
17...	--	--	8.0	--	92	35	--	135
AUG.								
01...	0915	2.6	11	0	89	34	130	--
14...	--	--	9.0	--	86	35	--	147
SEP.								
13...	0830	40	9.6	10	88	33	140	--
18...	--	--	8.0	--	91	35	--	152

09534300 WEST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.--Continued

PERIOD OF RECORD.--Chemical analyses: March 1971 to September 1972.

REMARKS.--No flow Oct. 19, 20, Mar. 7, 8, Apr. 4-6, 27, May 11, 12, June 6, 7, 27, 28, July 15, 18, Sept. 2-5, 20.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
12...	--	168	--	380	142	--	--	--	952
26...	--	160	--	375	132	--	--	--	932
NOV.									
08...	--	174	--	395	150	--	--	--	980
22...	--	180	--	390	150	--	--	--	970
DEC.									
13...	--	180	--	385	145	--	--	--	956
27...	--	176	--	380	140	--	--	--	952
JAN.									
10...	--	178	--	370	125	--	--	--	912
24...	--	184	--	385	152	--	--	--	964
31...	--	180	--	385	138	--	--	--	928
FEB.									
07...	--	172	--	375	128	--	--	--	906
28...	--	160	--	360	121	--	--	--	864
MAR.									
13...	--	172	--	360	127	--	--	--	892
27...	--	176	--	360	130	--	--	--	888
APR.									
10...	--	178	--	365	128	--	--	--	894
24...	--	172	--	365	134	--	--	--	878
MAY									
08...	--	176	--	360	121	--	--	--	876
22...	--	172	--	370	135	--	--	--	902
JUNE									
26...	--	158	--	345	116	--	--	--	830
JULY									
06...	5.0	164	0	370	130	.5	.07	180	852
17...	--	170	--	350	117	--	--	--	838
AUG.									
01...	5.3	162	0	360	120	.4	.18	170	860
14...	--	154	--	360	126	--	--	--	834
SEP.									
13...	5.0	163	0	350	120	.4	.05	190	832
18...	--	168	--	365	129	--	--	--	870

09534300 WEST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
12...	903	1.29	380	242	3.6	1420	8.1	--
26...	872	1.27	380	249	3.3	1390	8.2	--
NOV.								
08...	942	1.33	400	258	3.7	1500	8.2	--
22...	945	1.32	390	242	3.8	1490	8.2	--
DEC.								
13...	926	1.30	400	252	3.5	1450	8.2	--
27...	904	1.29	395	250	3.4	1440	8.1	--
JAN.								
10...	872	1.24	385	239	3.3	1370	8.1	--
24...	939	1.31	405	254	3.6	1490	8.2	--
31...	916	1.26	395	248	3.5	1420	8.2	--
FEB.								
07...	877	1.23	385	244	3.3	1370	8.2	--
28...	833	1.18	370	239	3.2	1320	8.3	--
MAR.								
13...	853	1.21	385	244	3.1	1360	8.2	--
27...	862	1.21	385	240	3.2	1350	8.2	--
APR.								
10...	868	1.22	385	239	3.3	1360	8.2	--
24...	870	1.19	385	244	3.3	1360	8.2	--
MAY								
08...	845	1.19	385	240	3.1	1320	8.1	--
22...	880	1.23	380	239	3.5	1370	8.1	--
JUNE								
26...	803	1.13	360	230	3.1	1260	8.0	--
JULY								
06...	873	1.16	370	230	3.4	1330	8.1	25.5
17...	822	1.14	375	236	3.0	1280	7.9	--
AUG.								
01...	830	1.17	360	230	3.0	1290	8.3	32.0
14...	840	1.13	360	234	3.4	1310	8.1	--
SEP.								
13...	827	1.13	360	220	3.2	1290	8.2	24.5
18...	864	1.18	370	232	3.4	1340	8.1	--

09534500 EAST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.

(Formerly published as 09534500 East Main Canal wasteway near San Luis, Ariz.)

LOCATION.--Lat 32°29'13", long 114°47'01", in NW¼SW¼ sec. 12, T. 11 S., R. 25 W., Yuma County, at gaging station, 0.2 mile east of Main Drain pumping plant, and 0.2 mile west of San Luis.

PERIOD OF RECORD.--Chemical analyses: October 1968 to September 1972.

REMARKS.--No flow Dec. 17, 25, Jan. 13, Mar. 23, June 22, July 8, Aug. 4, 5, 10, 22-24, Sept. 24. Unpublished miscellaneous chemical analyses for water years 1962-65, and continuing-record analyses for water years 1966-68 available from district office in Tucson, Ariz.

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED SODIUM PLUS POTAS-SIUM (MG/L)
OCT.								
12...	--	--	8.0	--	81	40	--	200
26...	--	--	11	--	100	43	--	215
NOV.								
08...	--	--	7.0	--	102	43	--	200
22...	--	--	9.0	--	103	41	--	200
DEC.								
13...	--	--	9.0	--	108	43	--	204
27...	--	--	12	--	85	42	--	290
JAN.								
10...	--	--	8.0	--	107	41	--	181
24...	--	--	7.0	--	105	41	--	199
31...	--	--	6.0	--	102	40	--	204
FEB.								
07...	--	--	4.0	--	100	41	--	183
28...	--	--	7.0	--	103	40	--	160
MAR.								
14...	--	--	5.0	--	104	39	--	179
28...	--	--	7.0	--	104	38	--	164
APR.								
13...	--	--	8.0	--	102	39	--	153
24...	--	--	6.0	--	98	39	--	155
MAY								
08...	--	--	5.0	--	95	37	--	172
22...	--	--	5.0	--	93	38	--	166
JUNE								
12...	--	--	8.0	--	97	37	--	170
JULY								
05...	1105	2.5	12	20	70	33	170	--
17...	--	--	8.0	--	81	41	--	191
AUG.								
02...	0755	4.3	16	10	75	37	200	--
14...	--	--	11	--	98	37	--	167
SEP.								
05...	1020	13	12	20	88	38	190	--
18...	--	--	9.0	--	63	37	--	173

09534500 EAST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ.--Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)
OCT.									
12...	--	128	--	410	190	--	--	--	1040
26...	--	180	--	425	215	--	--	--	1150
NOV.									
08...	--	176	--	415	205	--	--	--	1110
22...	--	176	--	410	205	--	--	--	1090
DEC.									
13...	--	188	--	410	218	--	--	--	1110
27...	--	222	--	490	230	--	--	--	1320
JAN.									
10...	--	188	--	385	195	--	--	--	1100
24...	--	192	--	405	202	--	--	--	1120
31...	--	180	--	415	202	--	--	--	1110
FEB.									
07...	--	170	--	395	190	--	--	--	1040
28...	--	184	--	370	165	--	--	--	986
MAR.									
14...	--	160	--	395	190	--	--	--	1040
28...	--	180	--	380	162	--	--	--	998
APR.									
13...	--	182	--	370	152	--	--	--	956
24...	--	174	--	370	152	--	--	--	940
MAY									
08...	--	160	--	380	169	--	--	--	988
22...	--	160	--	380	160	--	--	--	942
JUNE									
12...	--	162	--	375	172	--	--	--	974
JULY									
05...	4.6	58	0	400	170	.5	.00	230	896
17...	--	160	--	395	172	--	--	--	978
AUG.									
02...	5.1	90	0	430	200	.5	.00	270	1010
14...	--	168	--	370	167	--	--	--	982
SEP.									
05...	5.5	134	0	400	190	.6	.34	240	1000
18...	--	56	--	390	166	--	--	--	884

09534500 EAST MAIN CANAL WASTEWAY AT SAN LUIS, ARIZ. --Continued

CHEMICAL ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT.								
12...	993	1.41	365	260	4.5	1610	8.1	--
26...	1100	1.56	425	278	4.5	1740	8.2	--
NOV.								
08...	1060	1.51	430	286	4.2	1720	7.9	--
22...	1060	1.48	425	280	4.2	1700	8.1	--
DEC.								
13...	1090	1.51	445	291	4.2	1740	8.1	--
27...	1260	1.80	385	203	6.4	2030	8.2	--
JAN.								
10...	1010	1.50	435	281	3.8	1660	8.2	--
24...	1060	1.52	430	272	4.2	1710	8.1	--
31...	1060	1.51	420	272	4.3	1700	8.1	--
FEB.								
07...	998	1.41	420	280	3.9	1620	8.1	--
28...	937	1.34	420	269	3.4	1520	8.1	--
MAR.								
14...	992	1.41	420	289	3.8	1610	8.1	--
28...	945	1.36	415	268	3.5	1500	8.2	--
APR.								
13...	915	1.30	415	266	3.3	1450	8.0	--
24...	907	1.28	405	262	3.4	1430	8.2	--
MAY								
08...	938	1.34	390	259	3.8	1500	8.2	--
22...	922	1.28	390	259	3.7	1470	8.1	--
JUNE								
12...	940	1.32	395	262	3.7	1490	8.0	--
JULY								
05...	889	1.22	310	260	4.2	1390	8.7	28.0
17...	968	1.33	370	239	4.3	1500	7.9	--
AUG.								
02...	1010	1.37	340	270	4.7	1550	8.0	29.0
14...	934	1.34	395	257	3.6	1480	8.1	--
SEP.								
05...	992	1.36	380	270	4.3	1550	8.2	29.0
18...	866	1.20	310	264	4.3	1390	8.1	--

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

LITTLE COLORADO RIVER BASIN

09402000 LITTLE COLORADO RIVER NEAR CAMERON, ARIZ. (LAT 35°55'33", LONG 111°34'00")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT. 28...	1305	2300	7.7	40	11	2.4	89	1.9	118	0	63	65
JAN. 27...	1410	31	9.8	20	76	18	200	3.9	209	0	180	250

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT. 28...	.5	.23	130	326	300	.44	37	0	6.3	497	7.8	9.0
JAN. 27...	.4	.13	120	868	842	1.18	260	92	5.4	1500	8.3	1.0

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 to SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
JAN. 27...	1410	31	1400	6.8	1.0	16.0	12.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

BILL WILLIAMS RIVER BASIN

09426600 BILL WILLIAMS RIVER NEAR PLANET, ARIZ. (LAT 34°15'43", LONG 114°01'40")

DATE	TIME	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)	DIS-SOLVED FLUO-RIDE (F) (MG/L)
JAN.												
17...	1145	30	20	60	19	99	7.9	290	0	89	89	1.5

DATE	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JAN.											
17...	1.1	270	544	543	.74	230	0	2.9	888	8.0	11.0

FIELD DETERMINATIONS OF WATER QUALITY, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)	AIR TEMP-ERATURE (DEG C)	DIS-SOLVED OXYGEN (MG/L)
JAN.							
17...	1145	E7.0	880	7.7	11.0	16.5	12.2

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

GILA RIVER BASIN

09518000 GILA RIVER ABOVE DIVERSIONS, AT GILLESPIE DAM, ARIZ. (LAT 33°13'36", LONG 112°46'17")

(Irrigation network and pesticide station)

PESTICIDE ANALYSES, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	ALDRIN (UG/L)	ALDRIN IN BOTTOM DE-POSITS (UG/KG)	CHLOR-DANE (UG/L)	CHLOR-DANE IN BOTTOM DE-POSITS (UG/KG)	DDD (UG/L)	DDD IN BOTTOM DE-POSITS (UG/KG)	DDE (UG/L)	DDE IN BOTTOM DE-POSITS (UG/KG)
JAN. 12...	1100	10	.00	<.2	.0	<1.0	.01	2.3	.06	3.4
MAR. 28...	0930	20	.00	--	.0	--	.05	--	.25	--
JUNE 01...	1100	20	.00	<.2	.0	<1.0	.01	12	.08	45
SEP. 06...	0730	6.0	.00	--	.0	--	.00	--	.06	--

DATE	DDT (UG/L)	DDT IN BOTTOM DE-POSITS (UG/KG)	DI-AZINON (UG/L)	DI-ELDRIN (UG/L)	DI-ELDRIN IN BOTTOM DE-POSITS (UG/KG)	ENDRIN (UG/L)	ENDRIN IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR (UG/L)	HEPTA-CHLOR IN BOTTOM DE-POSITS (UG/KG)	HEPTA-CHLOR EPOXIDE (UG/L)
JAN. 12...	.03	.0	--	.01	<.2	.00	<.2	.00	<.2	.00
MAR. 28...	.09	--	--	.04	--	.00	--	.00	--	.00
JUNE 01...	.00	7.1	.03	.01	<.2	.00	<.2	.00	<.2	.00
SEP. 06...	.00	--	.02	.00	--	.00	--	.00	--	.00

DATE	HEPTA-CHLOR EPOXIDE IN BOT-TOM DE-POSITS (UG/KG)	LINDANE (UG/L)	LINDANE IN BOTTOM DE-POSITS (UG/KG)	MALA-THION (UG/L)	METHYL PARA-THION (UG/L)	PARA-THION (UG/L)	2,4-D (UG/L)	2,4,5-T (UG/L)	SILVEX (UG/L)
JAN. 12...	<.2	.02	<.2	--	--	--	.00	.00	.00
MAR. 28...	--	.03	--	--	--	--	.00	.00	.00
JUNE 01...	<.2	.00	<.2	.00	.00	.00	.00	.00	.00
SEP. 06...	--	.00	--	.00	.00	.00	.00	.00	.00

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529000 NORTH GILA DRAIN NO. 1 NEAR YUMA, ARIZ. (LAT 32°45'20", LONG 114°31'20")

DATE	TIME	DISCHARGE (CFS)	DISSOLVED SILICA (SIO2) (MG/L)	DISSOLVED IRON (FE) (UG/L)	DISSOLVED CALCIUM (CA) (MG/L)	DISSOLVED MAGNESIUM (MG) (MG/L)	DISSOLVED SODIUM (NA) (MG/L)	DISSOLVED POTASSIUM (K) (MG/L)	BICARBONATE (HCO3) (MG/L)	CARBONATE (CO3) (MG/L)	DISSOLVED SULFATE (SO4) (MG/L)	DISSOLVED CHLORIDE (CL) (MG/L)
OCT., 1971 20...	0945	10	21	20	120	46	260	5.5	256	0	510	210
JAN., 1972 26...	0952	2.8	21	10	110	43	230	5.9	246	0	450	250
APR. 26...	1000	4.2	22	10	120	47	280	5.5	261	0	520	270
JULY 20	1030	--	20	40	110	43	240	4.7	242	0	450	220

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180°C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NON-CARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS	PH (UNITS)	TEMPERATURE (DEG C)
OCT., 1971 20...	0.7	0.41	320	1360	1300	1.85	490	280	5.1	2050	7.8	17.0
JAN., 1972 26...	.7	.36	300	1240	1230	1.69	450	250	4.7	1970	7.8	12.5
APR. 26	.8	.59	320	1370	1400	1.86	490	280	5.5	2080	7.9	19.5
JULY 20...	.6	.17	300	1280	1210	1.74	450	250	4.9	1920	7.6	25.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529050 NORTH GILA DRAIN NO. 3 NEAR YUMA, ARIZ. (LAT 32°44'28", LONG 114°26'39")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT., 1971 20...	1540	0.14	19	10	100	39	180	5.4	208	0	410	150
JAN., 1972 26	1055	.18	20	10	100	38	180	6.6	207	0	410	170
APR. 26...	1230	.36	18	10	99	38	260	6.3	187	0	450	240
JULY 20...	1155	--	19	10	96	36	180	5.3	190	0	390	160

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1971 20...	0.6	0.43	270	1060	1010	1.44	410	240	3.9	1630	8.1	22.5
JAN., 1972 26...	.7	.03	250	1000	1030	1.36	410	240	3.9	1600	8.2	13.0
APR. 26...	.8	.22	350	1180	1210	1.60	400	250	5.6	1850	8.3	27.0
JULY 20...	.7	.05	240	1010	981	1.37	390	230	4.0	1520	7.8	30.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09529200 BRUCE CHURCH DRAIN NEAR YUMA, ARIZ. (LAT 32°43'46'', LONG 114°31'07'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT., 1971												
20...	1205	1.2	30	20	200	73	290	8.7	404	0	690	250
JAN., 1972												
26...	1115	--	18	20	180	72	250	9.6	340	0	700	240
APR.												
17...	1105	.70	25	10	190	65	290	8.0	382	0	690	280
JULY												
25...	0905	.08	24	10	170	77	290	9.9	299	0	710	290

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1971												
20...	0.8	0.56	370	1860	1740	2.53	800	470	4.5	2600	7.7	16.0
JAN., 1972												
26...	.7	.08	380	1720	1640	2.34	750	470	4.0	2470	8.1	7.5
APR.												
17...	.7	1.0	360	1770	1740	2.41	740	430	4.6	2510	7.9	17.5
JULY												
25...	.7	.01	380	1820	1720	2.48	740	500	4.6	2550	7.5	29.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09530500 DRAIN 8-B NEAR YUMA, ARIZ. (LAT 32°44'39", LONG 114°41'45")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT., 1971												
22...	1315	3.5	23	10	110	38	230	4.3	246	0	480	180
JAN., 1972												
21...	1015	1.5	21	10	96	34	180	5.1	218	0	400	160
APR.												
24...	1230	1.9	21	10	92	33	190	4.5	198	0	370	150
JULY												
24...	1115	2.0	24	10	99	32	190	4.3	203	0	400	160

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180 C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1971												
22...	.4	.39	250	1140	1190	1.55	430	230	4.8	1760	7.8	24.0
JAN., 1972												
21...	.6	.13	200	1010	1000	1.37	380	200	4.0	1560	8.0	14.0
APR.												
24...	.4	.01	210	992	959	1.35	370	200	4.3	1520	8.3	28.0
JULY												
24...	.5	.01	200	986	1010	1.34	380	210	4.2	1530	7.8	28.0

ANALYSES OF SAMPLES COLLECTED AT PARTIAL-RECORD STATIONS, WATER YEAR OCTOBER 1971 TO SEPTEMBER 1972

DIVERSIONS AND RETURN FLOWS AT AND BELOW IMPERIAL DAM

09531900 MAIN OUTLET DRAIN EXTENSION BELOW MORELOS DAM, ARIZ. (M.O.D.E. 3)

(LAT 32°42'16", LONG 114°43'32")

CONDUCTIVITY (MICROMHOS AT 25°C), RANDOM (INSTANTANEOUS)

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5560	6830	6700	6740	6570	---	---	---	---	5500	5430	5030
2	6280	6830	6640	6690	6600	---	---	---	---	5520	5400	6460
3	6580	6780	6640	6610	6650	---	---	---	---	5470	5430	6520
4	6570	6720	6670	6650	6600	---	---	---	---	5440	5230	6380
5	6510	6760	6640	6620	6670	---	---	---	---	5520	5340	6310
6	6510	6850	6660	6700	6620	---	---	---	---	5520	5290	6360
7	6490	6800	6700	6700	6620	---	---	---	---	5410	5200	6390
8	6600	6780	6800	6710	5010	---	---	---	---	5350	5220	6460
9	6580	6800	7000	6700	---	---	---	---	---	5030	5250	6320
10	6600	6890	6830	6680	---	---	---	---	---	5220	5140	6290
11	6550	6720	6720	6650	---	---	---	---	---	5230	5190	6410
12	6540	6760	6720	6550	---	---	---	---	---	5120	5180	6400
13	6610	6690	6750	6760	---	---	---	---	---	5100	5280	6390
14	6600	6650	6620	6710	---	---	---	---	---	5120	5210	6490
15	6640	6690	6740	6720	---	---	---	---	---	5110	5090	6460
16	6610	6660	6730	6740	---	---	---	---	---	5340	5090	6410
17	6500	6690	6790	6620	---	---	---	---	---	5310	5110	6470
18	6450	6690	6770	6690	---	---	---	---	---	5290	5130	6440
19	6400	6690	6750	6660	---	---	---	---	---	6410	5090	6480
20	6550	6700	6700	6660	---	---	---	---	---	6480	5150	6430
21	6800	6780	6670	6700	---	---	---	---	---	6470	5140	6400
22	6810	6750	6760	6650	---	---	---	---	---	6450	5170	6260
23	6820	6750	6730	6640	---	---	---	---	---	6520	5200	6390
24	6860	6720	6790	6670	---	---	---	---	---	6500	5310	6410
25	6860	6690	6780	6710	---	---	---	---	---	6310	5340	6350
26	6760	6650	6760	6730	---	---	---	---	---	6370	5280	6380
27	6710	6690	6720	6670	---	---	---	---	5800	6390	5310	6380
28	6680	6740	6710	6690	---	---	---	---	5630	6430	5380	6430
29	6670	6690	6670	6600	---	---	---	---	5640	6380	5280	6490
30	6760	6680	6630	6640	---	---	---	---	5430	5780	5210	6470
31	6820	---	6740	6640	---	---	---	---	---	5430	5060	---
AVG	6590	6740	6730	6680	---	---	---	---	---	5730	5230	6360

YEARLY AVERAGE = 6280

NOTE: NUMBER OF MISSING DAYS OF RECORD EXCEEDED 20% OF YEAR

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEARS OCTOBER 1970 TO SEPTEMBER 1972

SAN JUAN RIVER BASIN

09379200 CHINLE CREEK NEAR MEXICAN WATER, ARIZ.
(LAT 36°56'38", LONG 109°42'36")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JAN., 1971													
13...	1100	--	12	10	6	65	25	65	3.5	216	0	200	18
FEB.													
19...	1030	4.5	8.3	10	23	63	22	66	3.4	197	0	200	15
MAR.													
25...	0950	1.5	7.6	10	55	57	25	91	3.6	216	0	250	24

LITTLE COLORADO RIVER BASIN

09383400 LITTLE COLORADO RIVER AT GREER, ARIZ.
(LAT 34°01'00", LONG 109°27'24")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR., 1971													
14...	0945	3.6	28	120	53	7.9	2.7	4.3	2.0	50	0	5.0	1.5
AUG., 1972													
16...	1215	6.3	28	360	--	9.5	2.9	5.4	2.0	50	0	5.4	3.2

09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ.
(LAT 34°01'49", LONG 109°11'09")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR., 1971													
14...	1200	0.18	20	10	0	48	21	58	1.2	371	0	10	22

09383550 NUTRIOSO CREEK BELOW NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ.
(LAT 34°03'38", LONG 109°11'40")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971													
31...	1445	0.26	27	30	--	52	19	35	1.5	313	0	17	16

09384000 LITTLE COLORADO RIVER ABOVE LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ.
(LAT 34°19'50", LONG 109°21'18")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR., 1971													
14...	1355	3.5	22	10	21	40	39	50	4.5	378	0	51	21
AUG.													
31...	1355	8.8	22	20	--	33	14	31	4.0	225	0	25	10

09385500 LITTLE COLORADO RIVER BELOW LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ.
(LAT 34°22'05", LONG 109°22'56")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971													
31...	1200	27	24	20	--	40	25	58	5.0	321	0	58	20

09386500 LITTLE COLORADO RIVER ABOVE ZUNI RIVER, NEAR HUNT, ARIZ.
(LAT 34°38'30", LONG 109°40'35")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
APR., 1971													
14...	1730	0.10	10	20	35	130	61	480	15	267	0	670	[illegible]
AUG.													
31...	0945	.28	14	40	--	34	11	130	5.3	273	0	110	63

09388000 LITTLE COLORADO RIVER NEAR HUNT, ARIZ.
(LAT 34°38'50", LONG 109°42'10")

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971													
31...	0830	10	16	30	--	8.3	0.8	170	2.0	207	0	120	83

DATE	DISSOLVED FLUORIDE (F) (MG/L)	DISSOLVED NITRITE PLUS NITRATE (N) (MG/L)	DISSOLVED ORTHOPHOSPHATE (PO4) (MG/L)	DISSOLVED BORON (B) (UG/L)	DISSOLVED SOLIDS (RESIDUE AT 180°C) (MG/L)	DISSOLVED SOLIDS (SUM OF CONSTITUENTS) (MG/L)	DISSOLVED SOLIDS (TONS PER AC-FT)	HARDNESS (CA,MG) (MG/L)	NONCARBONATE HARDNESS (MG/L)	SODIUM ADSORPTION RATIO	SPECIFIC CONDUCTANCE (MICROMHOS)	PH (UNITS)	TEMPERATURE (DEG C)
SAN JUAN RIVER BASIN													
09379200 CHINLE CREEK NEAR MEXICAN WATER, ARIZ. (LAT 36°56'38'', LONG 109°42'36'')--Continued													
JAN., 1971 13...	0.2	0.75	0.03	--	--	498	0.68	270	88	1.7	768	8.0	0.0
FEB. 19...	.3	1.4	.06	--	--	481	.65	250	86	1.8	744	8.0	--
MAR. 25...	.4	.00	.00	--	--	565	.77	250	68	2.5	859	7.7	--
LITTLE COLORADO RIVER BASIN													
09383400 LITTLE COLORADO RIVER AT GREER, ARIZ. (LAT 34°01'00'', LONG 109°27'24'')--Continued													
APR., 1971 14...	0.1	0.02	0.06	--	--	76	0.10	31	0	0.3	74	8.2	5.0
AUG., 1972 16...	.1	.00	--	20	--	81	.11	36	0	.4	89	7.3	63.0
09383500 NUTRIOSO CREEK ABOVE NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°01'49'', LONG 109°11'09'')--Continued													
APR., 1971 14...	0.4	0.12	0.37	--	--	364	0.50	210	0	1.8	587	8.2	--
09383550 NUTRIOSO CREEK BELOW NELSON RESERVOIR, NEAR SPRINGERVILLE, ARIZ. (LAT 34°03'36'', LONG 109°11'40'')--Continued													
AUG., 1971 31...	0.6	0.13	0.67	240	--	324	0.44	210	0	1.1	532	7.7	20.0
09384000 LITTLE COLORADO RIVER ABOVE LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ. (LAT 34°19'50'', LONG 109°21'18'')--Continued													
APR., 1971 14...	0.4	0.07	0.09	--	--	414	0.56	260	0	1.3	668	7.9	--
AUG. 31...	.6	.34	.61	150	--	253	.34	140	0	1.1	403	7.6	27.0
09385500 LITTLE COLORADO RIVER BELOW LYMAN RESERVOIR, NEAR ST. JOHNS, ARIZ. (LAT 34°22'05'', LONG 109°22'56'')--Continued													
AUG., 1971 31...	0.8	0.04	.15	160	--	389	0.53	200	0	1.8	636	8.2	22.0
09386500 LITTLE COLORADO RIVER ABOVE ZUNI RIVER, NEAR HUNT, ARIZ. (LAT 34°38'30'', LONG 109°40'35'')--Continued													
APR., 1971 14...	1.2	0.88	0.31	--	--	2000	2.72	580	360	8.7	2950	8.0	--
AUG. 31...	1.4	.03	.06	350	--	504	.69	130	0	5.0	833	7.4	22.0
09388000 LITTLE COLORADO RIVER NEAR HUNT, ARIZ. (LAT 34°38'50'', LONG 109°42'10'')--Continued													
AUG., 1971 31...	1.2	0.18	0.34	420	--	505	0.69	24	0	15	864	7.4	20.0

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEARS OCTOBER 1970 TO SEPTEMBER 1972

LITTLE COLORADO RIVER BASIN

09393500 SILVER CREEK NEAR SNOWFLAKE, ARIZ.
(LAT 34°40'00'', LONG 110°02'30'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
MAY , 1971													
13...	1545	2.5	21	10	35	35	46	38	8.0	387	0	43	15
AUG.													
04...	1445	12	15	30	--	52	15	13	7.5	195	0	54	5.8
OCT.													
05...	1130	13	16	0	--	49	18	16	4.5	242	0	38	9.0

09394500 LITTLE COLORADO RIVER AT WOODRUFF, ARIZ.
(LAT 34°46'58'', LONG 110°02'37'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
MAY , 1971													
10...	1630	118	10	10	--	37	8.0	110	3.2	146	0	170	55
13...	1230	4.8	16	10	77	42	26	30	4.5	250	0	59	22
AUG.													
06...	1245	1275	--	30	0	6.5	.6	110	1.6	159	--	110	--
SEP.													
21...	0950	6000	11	60	--	3.4	.4	82	1.6	131	9	55	29

09395650 PUERCO RIVER NEAR LUPTON, ARIZ.
(LAT 35°19'40'', LONG 109°04'10'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971													
12...	1435	4.5	12	50	--	42	7.1	130	5.9	207	0	200	38
27...	1445	--	10	30	10	42	7.0	79	4.9	140	0	170	14
SEP.													
03...	1130	54	13	30	--	48	7.4	91	4.1	214	0	150	15
30...	1840	800	7.5	120	--	33	5.7	87	3.6	121	0	170	12
OCT.													
01...	1440	460	5.7	10	--	35	6.0	69	3.1	96	0	150	11
JULY, 1972		255	11										
18...	1745	255	11	30	120	71	12	92	6.2	205	0	210	24

09395900 BLACK CREEK NEAR LUPTON, ARIZ.
(LAT 35°27'09'', LONG 109°07'33'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971													
27...	1045	105	17	20	--	58	13	79	4.5	229	0	140	28
OCT.													
01...	1300	15	8.8	20	--	32	7.4	61	3.5	146	0	94	26

09397000 LITTLE COLORADO RIVER AT HOLBROOK, ARIZ.
(LAT 34°53'52'', LONG 110°09'45'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
MAY , 1971													
13...	1010	4.1	13	10	5	65	34	220	4.7	208	0	150	350
AUG.													
16...	1740	46	8.9	20	--	22	3.3	23	3.8	126	0	29	9.0
SEP.													
30...	0800	20000	--	--	--	4.2	.2	100	1.1	219	--	82	--
OCT.													
06...	1805	68	9.8	20	--	43	8.2	130	3.2	153	0	180	84

09398000 CHEVELON CREEK NEAR WINSLOW, ARIZ.
(LAT 34°55'35'', LONG 110°31'51'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
MAY , 1971													
12...	1545	4.2	6.8	10	120	68	45	640	5.9	263	0	170	960
OCT.													
04...	1145	123	3.7	20	--	18	5.2	15	1.1	75	0	12	22

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
LITTLE COLORADO RIVER BASIN													
09393500 SILVER CREEK NEAR SNOWFLAKE, ARIZ. (LAT 34°40'00'', LONG 110°02'30'')--Continued													
MAY , 1971													
13...	0.3	0.16	0.06	--	--	397	0.54	280	0	1.0	653	7.8	--
AUG.													
04...	.5	.59	.15	20	--	262	.36	190	32	.4	417	7.5	14.0
OCT.													
05...	.2	.30	.18	300	--	272	.37	200	0	.5	434	8.0	14.5
09394500 LITTLE COLORADO RIVER AT WOODRUFF, ARIZ. (LAT 34°46'58'', LONG 110°02'37'')--Continued													
MAY , 1971													
10...	0.6	0.28	0.09	190	--	467	0.64	130	6	4.3	773	7.7	14.0
13...	.3	.04	.03	--	--	323	.44	210	7	.9	525	8.1	--
AUG.													
06...	--	--	--	--	--	--	--	--	--	11	555	7.9	18.5
SEP.													
21...	.6	.95	.25	170	--	261	.36	10	0	11	357	8.5	--
09395650 PUERCO RIVER NEAR LUPTON, ARIZ. (LAT 35°19'40'', LONG 109°04'10'')--Continued													
AUG., 1971													
12...	1.4	1.4	--	10	--	544	0.74	130	0	4.9	859	7.4	27.0
27...	1.2	1.3	.09	--	--	403	.55	130	19	3.0	624	7.2	25.0
SEP.													
03...	.7	.61	.18	190	--	438	.60	150	0	3.2	677	7.8	21.5
30...	.8	1.2	.06	150	--	385	.52	110	7	3.7	604	7.6	13.0
OCT.													
01...	.7	1.2	.06	90	--	333	.45	110	33	2.8	527	7.5	12.0
JULY, 1972													
18...	.9	1.1	.12	--	--	533	.72	230	59	2.7	844	7.4	21.0
09395900 BLACK CREEK NEAR LUPTON, ARIZ. (LAT 35°27'09'', LONG 109°07'33'')--Continued													
AUG., 1971													
27...	0.4	0.44	0.25	150	--	455	0.62	200	11	2.4	702	7.8	18.0
OCT.													
01...	.4	.61	.15	120	--	308	.42	110	0	2.5	501	7.5	12.0
09397000 LITTLE COLORADO RIVER AT HOLBROOK, ARIZ. (LAT 34°53'52'', LONG 110°09'45'')--Continued													
MAY , 1971													
13...	0.3	0.04	0.00	--	--	939	1.28	300	130	5.5	1580	8.0	--
AUG.													
16...	.6	.53	--	20	--	164	.22	68	0	1.2	268	7.5	23.5
SEP.													
30	--	--	--	--	--	--	--	--	--	13	510	8.2	10.0
OCT.													
06...	.6	.34	.03	180	--	536	.73	140	16	4.8	887	7.7	14.0
09398000 CHEVELON CREEK NEAR WINSLOW, ARIZ. (LAT 34°55'35'', LONG 110°31'51'')--Continued													
MAY , 1971													
12...	0.2	0.01	0.09	--	--	2030	2.76	350	140	15	3590	7.6	--
OCT.													
04...	.1	.06	.03	50	--	114	.16	66	5	.8	207	7.2	13.0

LITTLE COLORADO RIVER BASIN

09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, ARIZ.
(LAT 34°40'03'', LONG 111°00'25'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
OCT., 1971 13...	--	--	3.7	10	--	25	12	1.6	.5	128	0	6.5	1.7

09399400 JACKS CANYON CREEK NEAR WINSLOW, ARIZ.
(LAT 34°55'17'', LONG 110°47'49'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
AUG., 1971 21...	1445	3.2	9.1	20	10	25	2.2	2.2	4.7	97	0	3.3	1.4
DEC. 28...	1440	127	14	40	8	13	2.5	2.6	2.4	46	0	5.8	3.7
30...	1225	--	14	40	0	11	2.6	1.0	2.7	46	0	5.5	2.8
31...	1235	--	15	30	8	13	3.0	2.0	2.7	47	0	5.9	1.9

09401250 MOENKOPI WASH NEAR MOENKOPI, ARIZ.
(LAT 36°06'36'', LONG 111°09'19'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JUNE, 1972 22...	1330	200	14	70	38	410	79	200	15	196	0	1500	25
SEP. 26...	--	2.5	10	30	--	89	23	100	5.5	243	0	320	10

09401400 MOENKOPI WASH NEAR TUBA CITY, ARIZ.
(LAT 36°01'25'', LONG 111°23'48'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
JAN., 1971 13...	1600	1.4	10	30	9	93	30	240	7.1	227	0	570	94
MAR. 26	1630	1.2	--	10	00	120	42	350	6.1	260	0	800	110
AUG. 13...	1530	12	14	10	--	330	56	450	17	133	0	1800	78
27...	1030	1420	11	20	20	330	67	150	9.3	116	0	1200	20
27...	1425	950	11	20	120	420	87	160	12	133	0	1600	20

BILL WILLIAMS RIVER BASIN

09424200 COTTONWOOD WASH NO. 1 NEAR KINGMAN, ARIZ.
(LAT 35°10'52'', LONG 113°28'08'')

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED MAN-GANESE (MN) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
FEB., 1971 01...	--	1.0	40	--	--	51	24	15	3.4	272	0	12	20
JUNE 02...	--	.53	36	--	--	52	25	16	3.8	279	0	12	23

LITTLE COLORADO RIVER BASIN

09398500 CLEAR CREEK BELOW WILLOW CREEK, NEAR WINSLOW, ARIZ.
(LAT 34°40'03", LONG 111°00'25")--Continued

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
OCT., 1971 13...	0.0	0.01	0.03	20	--	114	0.16	110	7	0.1	201	8.1	14.0

09399400 JACKS CANYON CREEK NEAR WINSLOW, ARIZ.
(LAT 34°55'17", LONG 110°47'49")--Continued

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
AUG., 1971 21...	0.4	0.44	0.31	--	--	98	0.13	71	0	0.1	157	7.4	23.0
DEC. 28...	.2	.01	.40	--	--	67	.09	43	5	.2	85	6.8	3.5
30...	.2	.11	.49	--	--	63	.09	38	0	.1	85	6.9	2.0
31...	.1	.12	.46	--	--	68	.09	45	6	.1	89	7.0	.5

09401250 MOENKOPI WASH NEAR MOENKOPI, ARIZ.
(LAT 36°06'36", LONG 111°09'19")--Continued

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JUNE, 1972 22...	0.7	2.4	0.03	--	--	2350	3.20	1300	1200	2.4	2780	7.9	22.0
SEP. 26...	.7	.03	--	130	--	678	.92	320	120	2.4	1010	8.2	21.0

09401400 MOENKOPI WASH NEAR TUBA CITY, ARIZ.
(LAT 36°01'25", LONG 111°23'48")--Continued

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
JAN., 1971 13...	0.5	2.7	9.5	--	--	1180	1.60	360	170	5.5	1730	7.6	0.0
MAR. 25...	.7	.84	2.5	--	--	1560	2.12	470	260	7.0	2240	7.6	--
AUG. 13...	1.1	1.2	--	290	--	2820	3.84	1100	940	6.0	3420	7.4	29.0
27...	1.0	2.8	.06	--	--	1860	2.53	1100	1000	2.0	2280	7.3	23.0
27...	1.1	3.7	.06	--	--	2390	3.25	1400	1300	1.9	2700	7.4	22.5

BILL WILLIAMS RIVER BASIN

09424200 COTTONWOOD WASH NO. 1 NEAR KINGMAN, ARIZ.
(LAT 35°10'52", LONG 113°28'08")--Continued

DATE	DIS-SOLVED FLUO-RIDE (F) (MG/L)	DIS-SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS-SOLVED ORTHO-PHOS-PHATE (PO4) (MG/L)	DIS-SOLVED BORON (B) (UG/L)	DIS-SOLVED SOLIDS (RESI-DUE AT 180°C) (MG/L)	DIS-SOLVED SOLIDS (SUM OF CONSTI-TUENTS) (MG/L)	DIS-SOLVED SOLIDS (TONS PER AC-FT)	HARD-NESS (CA,MG) (MG/L)	NON-CAR-BONATE HARD-NESS (MG/L)	SODIUM AD-SORP-TION RATIO	SPE-CIFIC CON-DUCT-ANCE (MICRO-MHOS)	PH (UNITS)	TEMPER-ATURE (DEG C)
FEB., 1971 01...	0.3	--	--	--	--	300	0.41	230	5	0.4	476	8.2	11.0
JUNE 02...	.3	--	--	--	--	305	.41	230	6	.5	498	8.1	16.0

MISCELLANEOUS ANALYSES OF STREAMS IN ARIZONA, WATER YEARS OCTOBER 1970 TO SEPTEMBER 1972

DATE	TIME	DIS-CHARGE (CFS)	DIS-SOLVED SILICA (SIO2) (MG/L)	DIS-SOLVED IRON (FE) (UG/L)	DIS-SOLVED CAL-CIUM (CA) (MG/L)	DIS-SOLVED MAG-NE-SIUM (MG) (MG/L)	DIS-SOLVED SODIUM (NA) (MG/L)	DIS-SOLVED PO-TAS-SIUM (K) (MG/L)	BICAR-BONATE (HCO3) (MG/L)	CAR-BONATE (CO3) (MG/L)	DIS-SOLVED SULFATE (SO4) (MG/L)	DIS-SOLVED CHLO-RIDE (CL) (MG/L)
GILA RIVER BASIN												
09479500 GILA RIVER NEAR LAVEEN, ARIZ. (LAT 33°15'25", LONG 112°09'50")												
AUG., 1971												
24...	1600	210	22	10	48	8.5	37	5.8	152	0	80	18
09504500 OAK CREEK NEAR CORNVILLE, ARIZ. (LAT 34°45'56", LONG 111°53'24")												
OCT., 1971												
12...	1630	25	15	10	42	20	8.6	1.0	242	0	4.8	5.0
09505200 WET BEAVER CREEK NEAR RIMROCK, ARIZ. (LAT 34°40'29", LONG 111°40'17")												
OCT., 1971												
14...	1530	6.9	20	20	24	14	6.3	1.1	164	0	5.8	2.8
09505800 WEST CLEAR CREEK NEAR CAMP VERDE, ARIZ. (LAT 34°32'19", LONG 111°41'38")												
OCT., 1971												
12...	1330	15	17	0	39	23	5.7	1.1	251	0	1.5	5.3

DATE	DIS- SOLVED FLUO- RIDE (F) (MG/L)	DIS- SOLVED NITRITE PLUS NITRATE (N) (MG/L)	DIS- SOLVED ORTHO- PHOS- PHATE (PO4) (MG/L)	DIS- SOLVED BORON (B) (UG/L)	DIS- SOLVED SOLIDS (SUM OF CONSTI- TUENTS (MG/L)	DIS- SOLVED SOLIDS (TONS PER AC-FT)	HARD- NESS (CA,MG) (MG/L)	NON- CAR- BONATE HARD- NESS (MG/L)	SODIUM AD- SORP- TION RATIO	SPE- CIFIC CON- DUCT- ANCE (MICRO- MHOS)	PH (UNITS)	TEMPER- ATURE (DEG C)
GILA RIVER BASIN												
09479500 GILA RIVER NEAR LAVEEN, ARIZ. (LAT 33°15'25'', LONG 112°09'59'')--Continued												
AUG., 1971 24...	1.1	1.1	0.31	80	300	0.41	150	30	1.3	472	7.5	32.0
09504500 OAK CREEK NEAR CORNVILLE, ARIZ. (LAT 34°45'56'', LONG 111°53'24'')--Continued												
OCT., 1971 12...	0.0	0.06	0.03	30	220	0.30	190	0	0.3	360	8.1	22.0
09505200 WET BEAVER CREEK NEAR RIMROCK, ARIZ. (LAT 34°40'29'', LONG 111°40'17'')--Continued												
OCT., 1971 14...	0.1	0.05	0.06	10	153	0.21	120	0	0.3	249	8.1	--
09505800 WEST CLEAR CREEK NEAR CAMP VERDE, ARIZ. (LAT 34°32'19'', LONG 111°41'38'')--Continued												
OCT., 1971 12...	0.1	0.01	0.03	20	214	0.29	190	0	0.2	370	8.3	--

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